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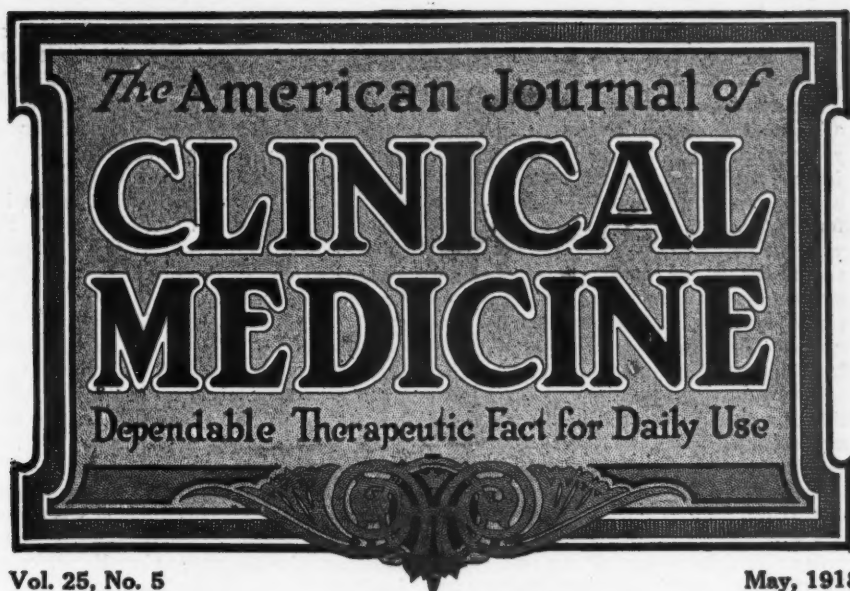
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## Children, and the Food-Problem

WHILE all classes of people are suffering from this war, it falls with heaviest force upon the children. In the war zones, their helplessness and low resisting power make them peculiarly liable to fall victims to the privations incidental to war. Then, the campaign of frightfulness instituted by the Huns has added immeasurably to the mortality of noncombatants, especially the children. At the outbreak of hostilities, this people stopped to explain—they couldn't excuse—this deliberately planned campaign of frightfulness, on the ground that it was a war measure designed to strike terror into the hearts of their enemies. Possibly they may have expected something of this kind; but, after nearly four years' experience, has anybody noticed a solitary instance of terror inspired in the fighting man by the ruthless murdering of the children? It is time, surely, that the pretense be laid aside and that the Germans acknowledge that their warfare upon women and children is simply a brutal satisfaction of the native cruelty that possesses the hearts of these were wolves. Instead of inspiring terror, these acts have given rise to a cold, relentless

conviction that extermination is the only remedy for this race, just as we should exterminate a brood of venomous serpents that infested our premises.

Meanwhile, it is hard on the children. Besides this, the sacrifice of millions of the population of Europe among the fittest to become fathers, the curtailing of foods, and the vastly increasing manual labor thrown upon the possible mothers have markedly diminished the birth rate. Nothing is more certain than that a war such as this results in a long-enduring deterioration in the quality of the baby crop. In Europe, this problem has become so serious that it is engaging the attention of scientists and governments among the belligerents. While we, in America, feel the influence to a much less degree, we feel it, nevertheless.

The advance in the cost of living falls with special weight upon the children of the poorer classes. While wages in general have risen, the increase has not been commensurate with that of the cost of food. Under the circumstances, it is inevitable that the cheaper kinds of food will be substituted for those that have most notably risen in price; and, unfortunately, it is precisely in

those of our foods most essential for the development of the young that the rise has been most decided.

We now know that it is not sufficient that a balanced diet is provided for the growing young of man or beast. No matter if the full proportion of proteids, carbohydrates, hydrocarbons, and mineral elements are found in the diet, this is not enough to provide for the healthy growth of the young animal unless the food also contains an ample supply of vitamins; and it is precisely in the fats of milk and eggs that our greatest supply of these essential elements is to be found.

Securing an increase of wages seems to be the only thought controlling the working-men's organizations, for the correction of existing evils; but, this by no means meets the situation. Nothing is more certain than that, if you double the sum which the laborer's wife finds in his pay-envelope on Saturday night, the money will not be spent as judiciously as was the previous smaller sum. Visions of wealth, of luxury, of articles long coveted but looked upon as impossible of attainment occupy her mind as the double allowance of banknotes tumbles into her hand. Music, finer clothes, even an automobile no longer are absolute impossibilities, and, under this unhealthy stimulus, the good housewife now brings home cheap substitutes for butter. Now, while peanut butter and oleomargarine may satisfy the palates of the children, they do not contain essential vitamins. The average woman doesn't know this; she doesn't realize, when she sees her children applying themselves to the substitutes for good, wholesome butter, that she really is starving them. And so the evil is done.

The trouble is, that we all are taking the wrong end of the problem. Increasing the wages, even to or beyond the mounting price of food, does not solve the difficulty; for, in fact, each material increase in wages is certain to be followed by a further increase in the market-price of foods. Moreover, the people feel so affluent when they see the big wages brought home by their men folk that they do not really care how much the grocer charges.

The true solution of the difficulty lies in providing cheaper foods that are fully adequate for every bodily need. Since the one paramount essential for the growing child is a sufficient supply of vitamins, we must

seek to find sources for these principles less costly than butter and eggs. As a matter of fact, one such available source we already have in alfalfa. All the preliminary work in this direction has been done. We know that a large variety of food-products for human consumption can be prepared from this clover. We know that it contains 14 percent and more of proteids, while no other food compares with it in its proportion of vitamins, excepting butter and eggs. We have been told how to prepare it in many palatable forms. The supply is inexhaustible and it can not be made so costly as to interfere with its general use. In fact, its utilization as a human food has been calculated to add from 25 percent upward to the total possible stock of food for human consumption.

The one question is, how to induce the people to utilize it, and in this, it seems, we must look to our own profession. Every physician should make himself perfectly familiar with the researches that have been made on the subject of the vitamins and their influence upon the nutrition of the young; then we should take pains to find market supplies of the wonderful "lucerne" in shape for human consumption. These preliminaries being settled, we should start, each in his own sphere, the missionary work of inducing the people to use this great boon. If we can not find a market supply of alfalfa, we should storm the millers, the wholesalers, the jobbers, and the manufacturers of food-products, until we compel them to take the matter up in earnest.

This, it seems to us, is the true and only solution of the question—and its importance is undeniable. For a hundred years, the world is going to be busy catching up on its baby crop. It simply must save its babies, once born. It must give them the best physical development that is possible; and, despite all the deteriorating influence of the war, we believe that by utilizing the knowledge we possess we can produce a crop of babies notably superior to the average of those of previous pre-war periods.

The great difficulty in the way of this program is, the inertia which renders it so difficult to start a radical reform; and this is more evident among the medical profession than among any other class of society. Let somebody start some fool notion such as Bergeon's gas-treatment of tuberculosis, and we doctors go crazy over it. But, bring



out some well-founded, solid, unassailable and most important improvement in our means and methods—as, for instance, the substitution of the alkaloids for the old worthless uncertainties—and we have to fight tooth and nail for a quarter of a century or longer to get our brethren to pay any attention. That's one of the drawbacks of our blooming democracy, and we have to put up with it. The autocrat can issue his orders, that every child in his dominion shall have a daily ration of alfalfa, and it'll get it; and as soon as the people get used to it and realize its inestimable value they will come around and thank their master for having done what he has. Well, so be it.

God hides some ideal in every human soul. At some time in our life we feel a trembling, fearful longing to do some good thing. Life finds its noblest spring of excellence in this hidden impulse to do our best.  
—Robert Collyer.

#### WHAT MAKES GERMANY SO STRONG?

We hear a great deal about the distinction to be made (or not to be made—according to what the viewpoint of the person talking happens to be) between the German government and the German people, in this unhappy struggle; especially since the President drew his official line of demarcation between the two. The question is argued back and forth, with considerable warmth on both sides; some stoutly asserting that the German people are the helpless, even the unwilling dupes of the Prussian oligarchy, and that in fighting that autocracy we are really fighting in their behalf and, as it were, by their side; while others just as emphatically scout such a differentiation and sweep the government and the people into the same class. The real truth is, that both of these positions are right; that they are not so irreconcilable with each other as they seem to be, but, on the contrary, perfectly compatible; and that, in fact, it is only by an intelligent perception of their congruity that one can gain an adequate understanding of the true psychology of the situation and explain the solidity and tenacity of the German nation in this supreme frightful combat.

If either of these two views of the situation were true, to the exclusion of the other, it would have been psychologically—one might almost say, historically—impossible for the war to have lasted as long as it

has. Lincoln's famous dictum, that "you cannot fool all the people all the time," is the homely expression of a sound psychological and ethnological principle.

If we assume that the German people were led into this war, and kept in it, by a sheer system of deceit and duplicity on the part of their leaders, it is simply unthinkable that such utter imposition could be sustained for such a length of time and under such conditions as the last three or four years represent.

On the other hand, to assume that the German people were deliberate and open-eyed partakers in the crime of the ages perpetrated by their military junkers, is equally to run one's head against a stone wall; for, there is another psychological and ethnological truth just as well established as the one we have just considered, namely, that you can not *corrupt* all the people all the time.

I probably shall be told by the extreme advocates of one or the other of these opposing opinions, or by both, that, once having been duped into participation in the war or having deliberately consented to it, the German people have been forced by circumstances and by the crushing power of the military arm to stay in it; that, having taken hold of the bear's tail, whether by enticement or by choice, they find it impossible to let go. To this, the obvious rejoinder is, that opportunity after opportunity has been given them of "letting go", but, they have persistently declined to do so; thus showing that the passive deception or the deliberate partnership, whichever we are disposed to attribute to them, still persists.

But, why do I insist that the collapse of either of these two assumed influences among the German people would put an end to the war—or at least begin to shape it toward an end? Granted that they have been deceived and duped as to the causes and objects of the war; why does it follow that a revelation of such deception should weaken, if not wholly destroy, their will to win? Assume that at the outset the great majority of the German people deliberately and with open eyes participated in a crime against civilization; what reason is there to conclude that an awakened conscience should cause a collapse of the military power—which has no conscience?

The answer involves another great, inviolable human principle; and it is to this

profound aspect of the matter that I wish to call attention in this editorial.

No nation can carry on a war entailing such devotion and sacrifice as this war has entailed upon the German nation, unless the soul of the great mass of the people believes in and assents to its moral justification. No evil purpose that is all evil can succeed or even gain headway—no evil purpose, that is to say, that involves a whole people. They can neither be duped nor coerced into participating in it; certainly not to the extent of devotion and sacrifice. Nor can they be corrupted into assenting to it. All mischievous undertakings that depend upon popular support derive their driving power, not from their mischievous elements, but, from the admixture of good in them, and from the conscientious advocacy—yes, and the willing advocacy—of decent people, to whom the undertaking, as a whole, seems to be good.

This is what constitutes—as we see it (and we believe ourselves to see it aright)—the profound whole danger of the German system. To the people of Germany it has been, on the whole, a good system, worth perpetuating and fighting for. Make no mistake! The German people believe in their government; not, because that government has duped them (although we believe it has); not, because they are all as corrupt as we believe that government to be; but, because to them it has been a good government, in which the good features have overwhelmed and obscured, as they were subtly meant to do, the sinister evils with which they were bound up.

We might as well recognize this truth. We *must*, if we are to grasp the true state of affairs. I remember a British cartoon that appeared just after the President had drawn his famous distinction between the German people and their masters; in which a Tommy said to his pal, "I see somebody is saying that we ain't fighting the German people"; to which his comrade sneeringly rejoins, "Will the blinking idiot kindly tell us who it is we've been up against all this time?"

There you have it. Whatever may be our attitude toward the German people, be sure that the German people are fighting *us*. And they are fighting us earnestly and solidly, not, because they are duped into it or because they are shameless partners in the crime of their leaders, but, because they believe in their government and because

(strange as it may seem to us) their government has given them cause to believe in it.

This is what gives Germany her great strength. It is true, in the ultimate sense, that her people are misled by their leaders. It is still more emphatically true, as President Wilson has pointed out, that there is a marked difference between the German people and their masters—the difference between deliberate schemers and sincere advocates; but (do not let us forget), deliberate schemers in, and sincere advocates of, the same cause.

From which (let us likewise not forget) two things deduce themselves: first, that both the deliberate schemers and the sincere advocates will fight us with equal determination and tenacity; second, that the schemers derive their indomitable power from the sincerity of the people.

It is true, again, from another angle of view, that there is *no* difference between the German government and the German people, in that they both partake, in effect, in the crimes of the former against civilization. However, the people are partakers in much the same sense that the purchasers of Standard oil, as also the employees of the Standard Oil Company, are partakers in the industrial oppression which some of us believe that corporation has committed against society. And I wish to point out, again, that, just as these industrial monopolies derive color of moral justification from the association of thousands of decent people who see only the good in their systems and conscientiously support them, so does the German autocracy derive its moral and physical power from the millions of decent, thinking people to whom for many years it has been a good government.

One of my German friends recently reproached me because, whereas, at the beginning of the war I expressed my sadness that we should be found fighting against the people from whom we got our Kris Kringle and our Christmas hymns, and our Grimm's fairy tales, now I am writing drastic arraignments of the German government. I do not go back one whit on either of these two positions. I still am sad at the thought of having to fight the German people—sadder than ever, because I realize more than I did then that these decent, home-loving, admirable German people—not by being crassly duped, as some imagine, nor by being shameless partners in

crime, as others aver, but, by reason of the very qualities that make them admirable—constitute the moral and physical strength in which the conscienceless Prussian autocracy stands entrenched; that, in order to overthrow the latter, we must fight the former—no sham fight, but, a deadly struggle to the death.

#### THE DANGER OF ALCOHOLIC MEDICINES

From time to time, I have stopped to call attention to the danger of rousing a slumbering craving for alcohol by the use of remedies containing this drug. The danger is an occasional one. Instances do not occur very frequently, still, they do occur with sufficient frequency that there is not a physician having a practice of average size who can not recall instances coming under his personal observation; and, believe me, one decided case of this kind is a-plenty. It is no small advantage in the use of granules and tablets and of remedies generally that may be given simply diffused through water that this peril is thereby avoided.

We note that *The Journal of the Outdoor Life* is taking this subject up actively. In the November number of 1917, page 339, it says: "*The Journal* stands for prohibition, but, it stands for prohibition, not only of alcoholic beverages sold under their right name, but, for the prohibition of medicines that will produce drunkenness, destitution, and disease just as quickly as will beer and whisky. If the prohibition of alcoholic liquors is not to mean the rapid expansion of the much more iniquitous plague of fake-cure advertising, with all of its consequent evils, it is high time that social workers take a stand for complete prohibition or control of this latter industry, as well as of the liquor interests."

There we have the matter in a nutshell. The worst of it is, that this iniquitous drugging insidiously and unsuspected by the victims creates alcoholic habitués. In the old, old days, we knew two brothers who were well-advanced in years. One of them kept his whisky-decanter always supplied. He would take little nips, repeated every few minutes, until he felt comfortably "pickled", and thereafter sip just often enough to keep himself in that beatific condition. His brother was the most prominent temperance-worker in the community, subscribing

for and distributing temperance-publications by the hundred, and never failed to throw his influence against the use of liquor. However, he purchased Hostetter's Stomach Bitters by the case and used it precisely as his brother tiddled his straight whisky. Both these old men sank, in time, into their graves, the younger brother to the last unconscious that he was a habitual drunkard.

If we could read the secret history of our enemies we should find in each man's life sorrow and suffering enough to disarm all hostility. —Longfellow.

#### THE NAVY—GOD BLESS IT

Some surprise has been manifested over the fact that the call to men in our new navy has been so largely filled by recruits from the great Midwest. Few of these men had ever seen the sea. To most of them, it seemed to be but a name; but, in truth, it is far more than this—it is a tradition and an inheritance.

The home of Saxon and Angle, Dane and Norseman was the storm-swept shore of the northern ocean. The sea carried them to Britain. Centuries later, the sea carried their liberty-loving descendants to the shores of America. It is in the blood and, even as Xenophon's Greeks welcomed the sea with shouts of "*Thalassa, thalassa*," so the call of the deep stirred the profoundest depths of our being.

It was with no little pride, therefore, that we read of the Navy's preparedness when the need reached us. God bless the American Navy. Our first line of defense has been proved to be worthily manned and worthily led; for, seeing the gathering storm, every possible precaution was taken, every preparation made, and the result is all perceptible. The arrival of the first American flotilla in the war zone marked the sharpening of the conflict and quickened the action of securing the results most gratifying to us all. Very little was said of resistance to submarines by merchant vessels until our own American ships began to shoot back with effect. In every branch of the Navy's work, efficiency was manifested at the start and has been constantly increasing, and, yet, in the military words of John Paul Jones, "we haven't begun to fight yet."

In all the foregoing, there isn't a word that is not fully applicable to the work of the medical corps. We have before us the

annual report of Surgeon-General Braisted of the Navy, chief of the bureau for the year 1917. It is very gratifying reading. On nearly every page, we find items we should like to tell you about; how the personnel of the medical corps was raised from a strength of 345 to something like 1,800 officers available for duty for one kind or other, and this without in any degree lowering the very high standard of the Navy. Pains were taken to secure men from the very best classes, and the navy medical schools afforded instructions to the newcomers on the duties peculiar to the service that are not taught in the ordinary medical colleges. Besides this, the dental corps, the nurse- and the hospital corps, and all other accessory bodies were, likewise, developed in personnel and subjected to the most thorough training available.

Great extensions have been made to the hospitals, so that, once the demand is made for their services, there will be a place to put every patient at all likely to need hospital treatment. From nine to twenty-four new buildings have been added to each of the six eastern hospitals that the equipment demanded. The arrangements for isolating patients afflicted with contagious diseases could not be better than they are under the circumstances.

Not the least of the many duties falling on the medical corps has been the selection of suitable men for the aviation service. But, indeed, we could go through this report and fill page after page with excerpts of profound interest, showing the good work done by our colleagues of the foul anchor. The treatment and early collection of ample stocks of the most-needed drugs; the production of vaccine-points by the hundred thousand; of antitoxins by millions of units; the association of skilled specialists wherever required; improving equipment of ships being built; these are some of the means by which the worth of our young sailor has been credited.

To delfy and unduly extol the Moderns is becoming to no reasonable man. Medicine is not a production of human reason, but a daughter of time, originating in long experience.

—Giorgio Baglivi.

#### PRESERVATION OF VISION

In the work of the selective-service boards all over the country, the great frequency of defective vision has attracted the

attention of physicians in an unusual degree. The necessity is realized, of taking steps with a view to the prevention of this defect in the growing and in future generations.

We are informed by the Illuminating Engineering Society (No. 29 West Thirty-Ninth Street, New York City) that a revised edition of its "Code of Lighting School Buildings" is now being placed in type. It will be remembered that the first edition of this code was circulated, several months ago, for the purpose of obtaining discussions and criticisms. As a result, some one hundred communications have been received from lighting-experts, architects, educators, and school-superintendents. These have been carefully considered by the committee on lighting legislation in its revision of the technical data and principles of school lighting, which are embodied in the code.

Some 20,000,000 school-children in the United States daily perform work trying to the eyes. Proper illumination is essential. Available statistics show that nearly 10 percent of the school-children examined have defective vision. The exactment of rules and regulations and the dissemination of knowledge relating to correct lighting-conditions is one of the most important duties of our educational institutions and legislative bodies.

While the code is intended primarily as an aid in formulating legislation relating to the lighting of school-buildings, it is also intended for school-authorities as a guide in individual efforts to improve lighting-conditions.

The revised edition of the "Code of Lighting School-Buildings" is being printed and will be sold at cost to interested parties.

#### MENTAL SANITATION

The province of sanitary science is supposed to be the physical world. Its office is, to minister to the physical well-being of humanity. It is not generally supposed to enter the realm of metaphysics and lay its balm upon man's psychic existence; yet, the relation between mind and body is such that whatever affects one more or less directly or indirectly affects the other. Physical suffering creates mental disturbance, and the physical ills surrounding the body illy affect the mind, and the re-



flex of this disturbed mental condition debilitates the physical forces. We cannot dissociate filth and disease, and with them we always expect to find a low mentality.

In the forsaken, poor, and filthy districts of our cities, amid the squalid homes of poverty, we find low physical and mental conditions. These gloomy, pinched, and oppressive surroundings dwarf alike the mind and body and transmit to posterity the curse of feeble minds and feeble bodies. The influence of these noisome abodes quickens the ills that waste the latter and prey upon the former until the higher motives of the soul are lost amid the ruins of wrecked purposes, blasted hopes, and a shattered faith in the gentler mercies of Providence.

The pride of life is banished by the hardships of living and every joy that brightens the mind, and every comfort that lightens existence yields to trouble, worry, suffering, and all the miseries following the gloomy and spiritless train of want and disease. Energy deserts the worn body, hope forsakes the discouraged mind, and both are left to a helplessness that is unable to remove from life those unsanitary surroundings and disease-breeding conditions that so far destroy the nobler impulses of the mind as to disqualify it from rising above the low conditions into which it has fallen.

On the other hand, sanitation has a salutary influence on the mental as well as the physical existence. There is a sympathetic action of the body on the mind and a reflex action of the mind on the body. Salubrious surroundings, the observance of sanitary laws, with the accompanying sense of cleanliness and security, place the mind in a state of enjoyment of these things and fill it with a deeper appreciation of the health and vigor these observances bring.

Through these influences, the mind is filled with the consciousness of right living—life freed from the contamination of filth, the degenerating influences of disorders, slothful indulgences, and the debilitating effects of unhealthful surroundings. The sense of such living not only is enjoyable and invigorating, but, it is ennobling and purifying. It touches the mind with a soothing hand that comforts and strengthens. It fills the mind with the consciousness not only of existence,

but, with the consciousness of right living and the beauties of a well-rounded, symmetrical life.

The sense of having properly observed the laws of health lends a charm to living that makes life more appreciable and enjoyable and its purposes and destinies better understood and more sacredly regarded, its powers more valued and its possibilities more fully recognized.

The effect of the mind, thus refined and cultured and invigorated, acting back upon the body is most salutary and well understood. It cannot fail to recognize the importance of right living and to direct the course of life in conformity therewith. It is no longer indifferent to, or neglectful of, the conditions of health, and will not allow a departure therefrom, to mar, debilitate or destroy the physical being. Sanitation has reached the mind and set its seal on the source of all action, and directs all conduct in accordance with its refinement and quickened sense of the importance of a life true to its nobler being, higher purposes, and greater possibilities.

There is a better thing than the great man who is always speaking, and that is the great man who only speaks when he has a great word to say.

—William Winter.

## DO NOT FORGET THE HEART

An automobile cannot run well, a steamer cannot make its voyage nor a set of machinery do its required work, unless the engine is strong and in good working order. This is axiomatic and recognized by everybody, and no one is surprised at the delay when the engine is reported out of order. However, many physicians seem blind to this fact, and try to treat their patients as if a sound heart unquestionably were behind the system, and that the trouble needs must be somewhere else in the system.

If we will carefully examine the heart in each and every patient coming to us for treatment, we shall be amazed at the number of weak and crippled of such organs disclosed. By studying the histories of our patients, we often shall learn of a childhood scarlatina or rheumatism, that crippled the heart. The patient will maintain that his heart is all right and may cite as proof his having passed one or more examinations for life insurance. Yet the bronchitis or the gastric fermentation

or renal insufficiency does not yield to the orthodox line of treatment. As soon, however, as digitalis or another cardiac is resorted to, and thus the circulation improved, his complaint disappears.

Altogether too many diseases are regarded as entities, both by patient and by physician, and are treated as such. We should remember the fable of the rebellion of the different organs of the body against the whole, which resulted in disaster to the body, special as well as general. All parts of the body are interdependent. The stomach cannot do without the help of the heart any more than it can give up the absorptive glands. The bronchitis that does not yield to the use of expectorants needs the aid of heart tonics and vasomotor dilators.

No doubt, in cases of diphtheria, scarlet fever, acute rheumatism, and the more important acute infectious diseases, the heart gets enough attention, and to spare; but, the chronic troubles, which make up the bulk of our practice, need more attention paid to the propelling energy; and, when the help is turned toward the heart, the chronic ailments will be changed the better. If the result is not a cure, it at least will be increased life and freedom from pain and discomfort. These patients need all our help.

Once more, examine your patients thoroughly, and "forget not the heart."

Ennui, perhaps, has made more gamblers than avarice, more drunkards than thirst, and perhaps as many suicides as despair. —Colton.

### WHAT TO DO WITH THE OLD PEOPLE

In *The Medical Review of Reviews* for November last, Dr. M. W. Thewliss contributed an article on the importance of providing aged persons with work, and what he says is as true as the subject is of importance. The necessity of occupation is as great in the case of old people as it is in that of children and adults, while the possibilities of harm due to the tedium of idleness persist until mental activity has ceased altogether or until life is extinct.

The question is what to do about it or, rather, what manner of occupation to provide for the aged. Doctor Thewliss refers to several instances where old men or old women retained the management of their

business affairs even after they had passed the age of eighty and through this instrumentality retained a high degree of physical and mental vigor as well as the active respect and affection of their surroundings. It may be humiliating, but, nevertheless, it is a fact that the presence of the aged granddad and grandmother, when they sit by the fireside doing absolutely nothing, very soon becomes irksome and that, in consequence, there is unpleasantness in the family, thus resulting in unhappiness to the old as well as to the younger people.

It has always been with great hesitation that the present writer agreed to the desire of his aged patients to "retire", unless some interesting occupation could be provided, one that would take the place of the abandoned business interest and would keep them from feeling themselves a hindrance or a useless encumbrance.

The mentality of the old people is peculiar in many respects; above all, they sometimes are morbidly sensitive, while others may show a surprising and unaccustomed lack of interest for anything but their own concerns. We have known old people, who had lived unusually busy, unselfish, and benevolent lives, to grow self-centered and evince a selfishness and want of consideration for the wishes of those upon whom they came to depend that was startling.

But, we also have seen old people bemoan pitifully their inability to follow their former pursuits and to be touchingly grateful for any small occupation when they could be persuaded that the result of their work was of actual use and that it was not offered merely for the sake of satisfying them.

While in the case of aged women it is relatively simple to provide them with suitable occupation, there always being many things to be done about and in the house that they can accomplish readily and without undue fatigue, it is not so easy in the case of old men. Doctor Thewliss pleads that they should be given positions involving relatively slight responsibility, and but little exertion. Some old men undoubtedly could act as night-watchmen in office-buildings and elsewhere, while retired business men could be occupied in keeping in order the books of two or three small neighborhood stores. If a man is handy with tools, he may turn his attention to the making of toys or to other manual pursuits;



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Major General William C. Gorgas.  
Surgeon General U. S. Army.

while, also, as Nascher has pointed out, gardening and plant culture provides a simple, yet interesting, occupation for the aged people.

Certain it is that old people, unless they are actually ill or debilitated, should not be permitted to be idle, but, should be given light tasks; however, it must not be forgotten that the accomplishment of these tasks calls for definite commendation and even praise, even though the results may not be of definite value and, in fact, merely be serving to encourage the old in feeling that they still are of some use in the world. There is nothing quite so pitiful and humiliating as the consciousness of being shelved

absolutely and definitely, the knowledge that the world has passed you by and that you have ceased to be a figure in its calculations. We shall all come to it in time. Let us treat our old folks as we ourselves shall want to be treated by those who are following in our footsteps.

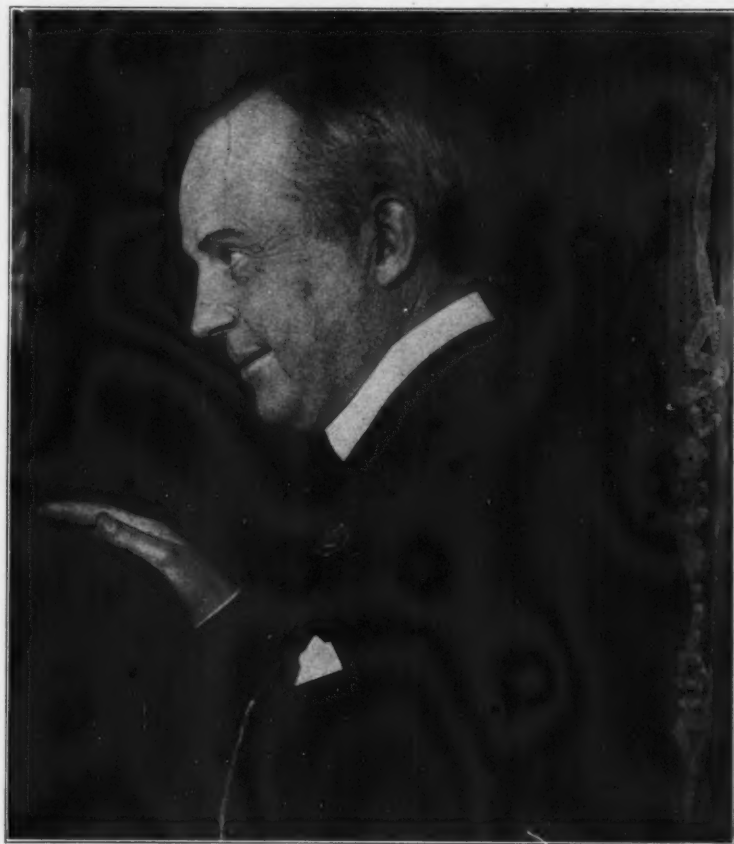
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Democracy will itself accomplish the salutary universal change from delusive to real, and make a new blessed world of us by and by. —Carlyle.

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#### RAISING THE SINEWS OF WAR

While we are getting ready for this issue of *CLINICAL MEDICINE*, the Third Liberty Loan is being started all over the country, a



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Admiral William C. Braisted,  
Surgeon General U. S. Navy.

tremendous drive being initiated and carried through for the purpose of raising the huge sums of money that are necessary for the conduct of the war. Many prominent people in every walk of life are devoting time and effort to the task of securing subscribers and carefully instructed teams of solicitors are combing the residence districts for the same purpose; even the children have enlisted their aid in this nation-wide undertaking; in short, the entire nation has arisen, in order to encourage itself to put up the means for the great struggle between right and brute force.

It hardly seems necessary to more than call attention to the Third Liberty Bond is-

sue that is now before the public. Oratory, moral suasion or forceful insistence could not bring it home to our minds more strongly than it already is impressed upon them that our wholehearted and enthusiastic support of the Government is a necessary and unavoidable consequence of the social and political upheaval that has been staged in European countries these three years. Even if we would, the American people could not hold aloof, could not remain apart, depending upon the peoples of the Entente to fight out the war. It is our war as much as it is that of England and France and Italy and Belgium, and we are concerned in it, and were from the begin-





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Rupert Blue, M. D., D. Sc.  
Surgeon General, U. S. Public Health Service.

ning, as much as were these other nations.

Why, then, should there be any question

at all about the necessity of responding to the request for money and funds, on the part of the Government? There should be



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Major Franklin N. Martin, M. R. C.  
Member of the Advisory Commission of the Council of National Defense.

none; nay, there is none. Every true American recognizes the need of getting behind; every one knows that money, and again money, and yet again money is indispensable as a means of maintaining the armies at the battle front, in the training camps, on the farms, and in the factories; all these armies being made up of soldiers and of fighters who are doing their share, each one in his allotted place, toward the same purpose.

If anyone should hesitate to contribute his utmost toward the conduct of this war in support of civilization, of liberty, of democracy, let him ask himself whether he would wish to have the battles fought out on American soil. No? Very well; then let

us buy Liberty Bonds; as many as we can pay for; even if we have to go without luxuries; even if we have to give up some things that we have come to consider necessary and that, yet, are nonessentials.

#### OUR LEADING ARTICLES

In this number we take pleasure in printing several articles, from medical officers now in active service, which throw an interesting and instructive light on conditions in camp. It really is a matter of course, but may be mentioned that these articles are published with the permission of the Surgeon General of the Army. This permission is absolutely necessary, but it is never withheld unless for grave cause.

# Leading Articles

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## The Effects of Camp Training Upon Drafted Men

A Study of Camp Grant

By CAPTAIN EDWARD J. ABBOTT, M. R. C., Camp Grant, Rockford, Illinois

**A**MONG the many historic names of the Mohawk Valley, none is more fondly cherished than that of "The Iron-Hearted Regiment". The men of the valley, mindful of their revolutionary sires, as members of this regiment, fought and died that liberty of the people, for the people, and by the people might not perish from the earth. We of the Mohawk Valley are proud of the Iron-Hearted Regiment, proud of what they were and did to merit the title "Iron-Hearted". Today, I, a Mohawk Valley man, am proud to belong to a new "iron-hearted" regiment—the Iron-Hearted Regiment of the Windy City, the Melting-Pot Regiment, which has earned its title by its steel-like sturdiness, its hardness of physique, its in-trepid purpose.

### About the Melting-Pot Regiment.

"Melting-pot" is a well-chosen term; for, like the melting-pot used in making crucible steel, the pale-sallow striplings—the self indulgent weaklings, men who thought of physical exercise in terms of self-indulgence, whose wills were like rubber tubes bending in the line of least resistance—have been melted together by the fierce purpose of the commander, have had blown out of their lives all dross and weakness by the revivifying force of his precept and example; they have had imparted to them, as the blast imparts to the iron, the sturdy toughness and full-hearted devotion of their leader, Col. Charles H. Howland.

### A Sketch of Colonel Howland

Colonel Howland stands four-square—a man among his men. His commands show

that he himself has learned the lesson of obedience. His command "Forward" finds him in the van, and where his men are there you will find him, also. He has stood as a physical inspiration to his organization. His habits, his conception of what it means to be a soldier, his self-abnegation, his indifference to camp discomforts bring to mind the first crusaders and the men of Valley Forge. A study of Colonel Howland is a study of his regiment, and the regiment reflects the hardiness, stamina, and courage of its commander. Colonel Howland is a lineal descendant of the Puritan Howland, and it is his pride that the Puritan stock has remained without foreign admixture to this day. He was graduated from the military academy in 1895; his military advancement has been based upon worth. He was promoted to a captaincy in the volunteers for bravery on the field of battle in the Philippines, was selected as commandant of the Pacific branch, U. S. disciplinary barracks. He was commissioned as colonel in the present war and now commands the "Melting-Pot" regiment, the 343rd of the 86th division. He wears the treasury gold life-saving medal.

His physical characteristics, singleness and intensity of purpose; and his sympathetic understanding of human nature caused his election as commandant of the Pacific branch U. S. disciplinary barracks. Here, in the reclamation of deserters and military criminals—the flotsam and jetsam of the army—his influence over men made itself felt, and he was instrumental in restoring to themselves, to society, and to the



Colonel Charles R. Howland, N. A.  
Camp Grant, Rockford, Ill.

army men who otherwise would have sunk into the submerged tenth; and more than 400 such reclaimed dishonorably discharged soldiers are now serving their government honestly and faithfully as soldiers—and most of them are noncommissioned officers, because of their being highly trained and efficient.

No regiment is stronger than its commanding officer. If he is a weakling, his official and enlisted personnel will lack stamina. He will find it impossible to weave the various and often discordant strands of humanity into a fabric that will stand the wear of a hard campaign.

"We are at war. This is war, not a picnic." These were practically the first words

I heard from the lips of my Colonel, and these words are the keynote of his life and of all his efforts and methods. He is temperate in all things; abstemious to an almost incredible degree. He neither uses alcoholic beverages nor tobacco in any form. He sleeps eight hours and works intensely sixteen hours. If he is to arise at 4 a. m., he retires at 8 p. m.; neither sleep nor work must suffer. Twenty-eight years of abstemious army-life have hardened muscles and will, and, if one may speak of intimate things of one's colonel, he wears B. V. D.'s summer and winter, the thinnest woolen socks, light-weight woolen O. D. uniforms and, even when the low record of 28 degrees below zero was reached, went to the





Captain Edward J. Abbott, M. R. C.  
Camp Grant, Rockford, Ill.

range, the trenches, and on the all-day marches with no addition to his everyday garb, and without ear-coverings. To a protest uttered by one surgeon, he replied: "No man with rich oxygenated blood needs earmuffs; exercise sends warm blood to my ears. Like the Indian who replied, "Me all face," when expostulated with by a paleface for standing with bare feet on the ice, so Colonel Howland is "all face." He is a disciple of the "open air," and he and his men live, literally, in the open air; by day, in all weathers in the open, at night, in barracks immaculately clean and fully ventilated. He has practically made me a believer in a modified form of Christian Science, a believer in the victory of a reinforced mind and body over the rigor and malign forces of nature.

This hardness of body and mental for-

titude he has imparted to officers and men—the reenforcement of the minds and bodies of the men was a gradual process. The ordinary military methods were employed; setting-up exercises, drill, marches, regularity of hours, the pruning off of all habits not conducive to military discipline, and, above all, emphasis was placed upon the sanitary details of camp-life. Colonel Howland was, and is, cognizant of the minutest details of his men's life, daily routine, and equipment. The slightest deviation from the right in sanitary matters was visited with a punishment that sometimes seemed out of proportion to the offense, but, the justice of which was always recognized by the men. Not a few of the captains have been "on the carpet" in the ascetically furnished office of the Colonel and not only received stentorian "bawling-out,"



The Library at Camp Grant. A great influence for good and contentment.

but, also deprivation of leave of absence for a month because of some infraction of regulations that were for the health and morale of their men.

#### What Military Training Is Accomplishing

This brief sketch may seem a strange introduction to a psychological and physical study of enlisted men. One must remember that no regiment is stronger than its commander, that his characteristics stamp themselves upon his officers and men, and that headquarters is the great central power-plant from which radiates the regimental force and spirit. Colonel Howland has stamped his ideals upon his regiment; and the 343rd regiment of infantry can show what six months of intensive training can do for men who started with bodies and minds undisciplined in the military sense.

What is true of this particular regiment, is true in more or less degree of all others now in training and will serve to dispel many of the false rumors regarding the treatment and condition of enlisted men.

To understand fully the physical and

psychical revolution that has occurred, let us make a comparison of the past with the present and then explain the methods by which the miracle was wrought.

The draft was selective. The exemption boards, to the best of their ability, chose men whom they thought physically fit. The selectives, in the main, were good representatives of the manhood that cities and the "piping times of peace" breed.

Those who saw the motley crowd de-train at Camp Grant and pantingly drag themselves to the barracks scarcely will recognize the same men in the sturdy soldier, straight and hardy, able to take a twenty-mile march in severest winter weather, stand all day in the trenches, march through mud, slush, and rain, return to the barracks, and next day present the most convincing proof of efficient training, the lowest sick call of months.

#### Some Psychological Aspects

The problems of beginning training were purely sanitary. Their solutions were found in the enforcement of reasonable

sanitary regulations. The hardest work was to instil into the men a sixth sense—the "sanitary sense." Until one comes into contact with a large body of men separated from feminine influence and the social restraints of civilized life, one does not realize how quickly the savage comes to the surface. No one who has not been at the inception of a camp can conceive of the enormous task facing the company and regimental organizers. The men enter upon a new world—"the old things have passed away, behold, all things have become new." A new mental attitude must be taken, or, rather, must be instilled into the men.

An analysis of the mental attitude of the selectives will reveal chaos. The whole edifice of their lives has crumbled and for a

tion and disciplining of the new recruit is, the impartation of knowledge—military, personal, and sanitary. His relation to the fighting force as a whole is explained. His personal status, responsibility, and duties are expounded and vividly illustrated; and the sanitary details and regulations not only are issued and insisted upon, but, are painstakingly explained and shown to be, not



Top Sergeant Maloney, of the Infirmary. A fine type of a soldier.

more or less brief period they busy themselves in sadly contemplating the ruins of their hopes and take a melancholy pleasure in nursing their fears.

The predominant physical element is fear. Fear does not mean cowardice—possibly a better term would be "apprehension," which has its inception in the lack of knowledge of present duties and the facing of the unknown future.

Ignorance has always been a synonym for fear. So, the first effort in the educa-



The jolly cook of the Infirmary. He feeds the boys well and, likewise, himself.

only reasonable, but, for the good of the men, individually and as a whole.

#### Their's Not To Reason Why.

The mental attitude of the recruit is a raging battlefield. The hardest fight is against self-indulgence, not of vicious sort, but, that kind in which we all indulged in civilian life, doing things when we liked, as we liked, and only when we liked. The recruit has to learn to obey unquestioningly, to turn to the right or left, to stand still, to march, to sleep, to arise, to eat, to perform toilet-duties, not at his own volition, but, at the will of someone else; and, apparently, without reason, at least, to him.

For the average American, this is the hardest task. To fight, is the natural right of the American citizen. To work, he con-

siders his portion; to argue, a divine right. Therefore, to obey, without question; to grasp the fact that his part is "not to reason why," and is "but to do" at the command of someone—possibly younger, inferior in education and social status, but, su-



Kitchen Police. These boys will make good wives for some women—some day.

perior because of special commission—is the most difficult for the freeborn argumentative American citizen. Therefore, men in the American Army are not whipped into line, but are convinced. The camps are not training cages for wild beasts nor civilizing centers for savages.

"Melting-pots" they may be, and are, fusing the conglomerate discordant foreign elements into a harmonious whole, doing in



One of Chicago's pretty girls who makes the lot of the infirmiry dentists more bearable.

six months that which twice six years of civilian life, with its segregation of each nationality, could not do.

The boys of foreign birth realize in themselves this awakening of the "American sense." One Italian in my company, in answer to a question, said: "Why, I go fighta da Kais? I tella you, he wanta maka me da European again. I American and fighta

da Kais, Cussa heem! because I lova da Unc' Sam and da American girl."

#### A Sanitary Sense Is Developed

The hardest thing to develop is, the "sanitary sense." By this, I mean a hygienic interpretation of the golden rule. A man does not want to use a dirty latrine, therefore, he will police carefully the latrine and not rebel when ordered to do that detail. He that does not like to eat contaminated food, does not relish meals served in dirty mess-halls, therefore, when he is "K. P.,"<sup>1</sup> he will work with energy; and will bear in mind that the hand that wields the scrub brush kills the germ. He is taught the fundamental facts of disease, and so, insists upon a separate latrine being used by a diseased soldier; he resents intrusion upon his private belongings, so, fights if his mess-kit is used by another. The cleanest man in the world is the well-trained, fully disciplined American soldier. He polices his barracks and



Log Cabin built at the trenches by a West Virginian mountaineer.

barrack streets, not, because he really wants to, but, because of his sanitary sense; and the place freest from flies, freer than the kitchens of the majority of my readers, is, the open-air field company kitchen. His sanitary sense is fully developed. The lines graven upon his mind by precept and example are ineffaceable, and he carries his sanitary sense into civilian life and employs it there.

One of the benefits to be derived from the training of the army will be, the utilization of this sanitary sense in family- and communal life. Public health and sanitation will be improved and loss of life in battle will more than be made up by the increased vitality and added longevity of

<sup>1</sup>"K. P.," Kitchen-police.



those who eventually return to civilian life. I think, then, that among the greatest and most glorious victories of this war you will find numbered the conquest of disease and dirt.

#### Summing of a Questionnaire

A questionnaire among a certain representative number of the enlisted personnel of the regiment, in conjunction with wildly scattered inquiries among officers and men, elicited the following interesting facts.

1. That the men are satisfied with their treatment.

2. That their environment, the housing, heating, latrine- and bathing-facilities are comfortable and conducive to their well-being.

3. That their food is abundant, well-cooked, appetizing, and satisfying.

4. That the work they do, whether routine or special, is no harder than, and in ninety percent of the cases not as hard as, the work of their civilian life. The only men who are harder worked in the camp are the cooks, who have to hustle to keep up with the insatiable appetites of the men.

5. That the men have gained in weight. The men whom I personally investigated gained an average of 5 pounds; many have gained 12 pounds.

6. That the war risk allotment has removed worry and anxiety about the care of dependents; the war insurance and disheartening thought of a poverty-stricken, crippled future for self or reliance upon charity for the support of dependents in case of death.

7. That the war-risk allotment plan, coupled with the war insurance written upon the life of each man, has a marvelous psychological influence upon the morale of the enlisted personnel.

8. The clothing is ample, sufficiently well-made, and personally fitted to each man. In the 343rd regiment, each company commander personally fits the shoes to the feet of the men and is held responsible for all ailments of the men attributable to ill-fitting shoes. This is in addition to the rigid inspection which the regimental detachment official personnel makes semi-monthly. As a result, foot troubles are becoming rare and the long marches decrease rather than increase attendance at "sick-call".

9. The facilities for amusement, physi-

cal and mental recreation, are ample, wholesome, and satisfying.

10. The medical and hospital facilities and service are able, ample, and effective.

Out of 43,000 men, 23 have died since the inception of the camp—a record unparalleled in any city of that population. Many of these men died from disease contracted in private life, and which had developed either before or soon after entrance into camp.

In the regimental infirmaries, the men are carefully looked over, and I can truthfully say, from experience as a general practitioner in private life, that, if the applicants for infirmary treatment had to pay for service, 90 percent of them never would cross the barrack street for treatment.

Those cases which can be treated under the limited facilities of the infirmary—limited as to drugs and operative procedure—are given the careful attention of seven surgeons and physicians; and, in addition, the service of three competent dentists is at command.

Those cases which we can not treat, because of the limited nature of equipment, are sent to the base hospital. Here, are assembled specialists in every branch of medicine and surgery, and the patient is examined thoroughly, treated carefully and scientifically, and nursed during illness or through surgical convalescence by graduate hospital nurses.

The equipment of the base hospital, whatever it may be elsewhere—and I do not think that Camp Grant is any exception to other camps—is as perfect as can be. Linen is plentiful and clean, food likewise, and attendance is better than the patients receive in the private wards of many hospitals.

The one trouble that the line men find with the hospital corps is, that the latter are too careful with the patients and keep them too long.

Despite the hue and cry about inefficiency, lack of supplies, sapping of morale, spreading of epidemic, suffering from cold, and all that slanderous tongues can muckrake up, the new recruit goes on, growing in efficiency, physical and mental, developing military and sanitary sense, undergoing a psychical and physical revolution, becoming a man, upright and stalwart; so that, when he returns to civilian life, he will be a

potent factor in advancing the national interests and wealth.

Again let me say that upon the intelligence, energizing will-power, and comprehensive viewpoint of the commanding officer depends the morale and physical well-being of the enlisted personnel.

To sum up the results of camp-life, I can do no better than to give the words

of a private: "I never knew what it was, to live, before; as a civilian, I must have been asleep all the time. I have added ten years to my life. I know how to live. Believe me! When I get back into civilian life, I'll make those slackers hustle to keep up with me. War may be no picnic, but, so far it has been a picnic to me."

Would that it were never worse!

## The Medical Detachment of a Regiment: Its Work in the Field

By W. F. VON ZELINSKI, M. D., B. Sc., Surgeon, 8th U. S. Field Artillery, Camp Wheeler, Georgia

WITH something like 14,000 doctors now in the army, it may seem at first glance that an article of this nature is superfluous, since those who are in the service are more or less familiar with the routine of the regimental surgeons' work, while those on the outside can have but little or no interest in it, not, probably, having any bearing on the problems of the individual civilian practitioner. Still, a large percentage of doctors have in the service sons, relatives or near-relatives, and many others may be interested in the methods of just how the "first line of defense"—strategically speaking—maintains the health of our troops. It is with these latter in mind and at the solicitation of the editor that this has been written.

At the outset, it is well to point out that the duties of organization commanders throughout the army are outlined in a set of regulations and these may be looked upon as the bible of the army. In addition to these rules, there are special manuals giving rules for the government of the medical, the quartermaster's, and other departments. The uninitiated who give but a cursory glance at these publications as well as the many special and general orders supplementing them, ninety-nine times out of a hundred give utterance to that much abused exclamation, "What an awful lot of red tape". Certainly, no one has a greater horror of, or shows greater disgust for, what this self-same "red tape" stands for than I; however, it may be remarked here that no organization of any consequence ever has been without some so-called red tape, and

that, when you find an organization that has little or none of it, you are dealing with "small fry".

The truth is, that that which is dubbed red tape in the government's service is called system in private concerns. Personally, I am a believer in the greater part of the government's red tape or, rather, say,



Regimental Medical Staff of the U. S. Field Artillery. The author stands second from the right.

the system of the medical department of the army; although it must be confessed that I am not a business man and my admiration may be based upon an ignorance of principles of efficiency or organization.

### Duties of the Regimental Surgeon

The personnel of a medical detachment varies with the kind of organization they are serving. Ordinarily, it includes from four to six medical officers and twenty-three to forty-five enlisted men; the officers being supposed to be of the grade of major (one) and captains or lieutenants (three). The duties of a regimental surgeon are clearly and succinctly outlined in paragraph 634 of

the manual of the medical department, as follows:

"The Surgeon of a line organization is both an advisory and administrative officer (Par. 361).

"He commands the sanitary troops on duty with the organization.

"He is the advisor of the organization commander in medical and sanitary matters and, to the extent of his authority, is responsible for the execution of sanitary measures in connection with the organization.

"He provides care and treatment for the

by the commanding officer, the entire personnel of the organization in personal hygiene and first aid.

"He trains his subordinates in all departments of field sanitary work.

"He makes timely requisition for necessary supplies and equipment."

The details as to how the various duties are to be carried out is a matter largely left



Shoulder Litters. Litter drill is an essential part of the enlisted man's training.

sick and wounded and is responsible for the efficient performance of the entire sanitary service of the organization.

"He makes such sanitary inspections as may be necessary. In connection therewith, he supervises the water supply and its purification, the sanitation of kitchens, the disposal of garbage and waste water, the police of latrines and urinals and the filling in and marking of the same when discontinued, the police of bathing-places and picket lines, the measures taken for the destruction of flies and mosquitoes, and all other sanitary procedures necessary to preserve the health of the command.

"He instructs, at suitable times designated



Following the regiment into action "Maud" keeps right up with the procession, doing her bit cheerfully.

to the discretion of the surgeon. In our organization, we have arranged the work in departments, and, so far as can be judged, with good results. Each officer takes turn for a period of one week in holding what is known as sick-call, and here, again, we are guided by regulations of the "Manual



Sanitary Combat Train on mule back. This contains everything required to establish the regimental aid station.

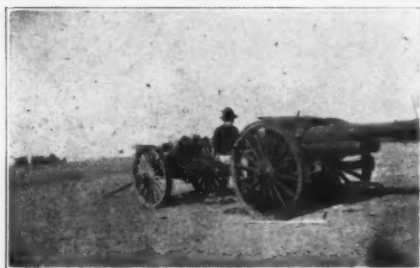
of the Medical Department" (Par. 206), which says:

"Sick-call is not a suitable time for careful examination and treatment of the sick. Its purpose is, to determine as expeditiously as possible the number of men unfit for duty, so that the morning report of sick may

be promptly sent to the commanding officer".

#### Sick-Call and the Blessed S and W Card

We hold sick-call at 6 a. m., which is about one-half hour before breakfast. This time is chosen to prevent as much as possible having our time taken up by "gold bricks"—those fellows who are attempting to evade some duty on the plea of illness. The idea is, that, as between possibly having to gulp a dose of castor-oil and losing breakfast, the castor-oil alternative will not be given preference. Such applicants as seem



A 6-inch "hypodermic" for strafing Heine. Makes one think of "Twilight" Sleep.

to require detailed examination are told to return at a later time, when they are looked after by the officer of the day; a detail which is changed daily, so as to permit each medical officer, in turn, taking advantage of time off on holidays.

The officer of the day prescribes and supervises the treatment of the men. Whenever a man comes to the dispensary, he must have his name placed on the sick-report by one of his superior officers, the medical attendant then indicates whether the complaint disables the patient for duty and what disposition has been made of him; that is to say, whether placed in quarters or in hospital. Cases marked quarters as a rule are of the slightly ill and ambulatory kind. Those who are more severely ill are sent to the base hospital.

Now comes one of the most aggravating items of the day's work, namely, the making out of a sick- and wounded-card, or the S and W card, as it is more familiarly called. This is an innocent-looking card, about 10 inches long and 4 inches wide and having space for the entry of 26 items. I dare say that anyone who has to do with this form

and reads these lines will do so with mixed emotions. The principal detail-item is that of diagnosis. Difficult at best, the diagnosis seemingly is rendered more complicated by requirements of the existing regulation, which very plainly—or, as some would have it, very intricately—states just how this is to be carried out. I have heard more than one ancient in the service say that one can handle these cards for ten years and still learn more about their makeup. Blessed is he who possesses a good "Sergeant, First Class," whose every other deficiency may be excused if he can put through three or more monthly sick- and wounded-reports, hand-running, without having some of them returned, accompanied by a letter made up of divers aspersions on his mental capacity. For myself, I can say that the study and contemplation of this card is and has been a liberal education, and that day may be counted lost when something new concerning it has not been discovered.

#### The Division of Duties

In this organization, the labor has been divided so that each officer concerns himself with some certain phase of the professional work permanently, while the military duties are changed from time to time as circumstances warrant. Thus, one officer takes care of all the inoculations and vaccinations; he has a set time, usually Saturday, from 10 to 12 a. m., in which he performs these vaccinations. This time is chosen in order to permit recovery over the Saturday afternoon and Sunday from any reaction that may occur. The inoculations are made record of in our office and are noted on the soldiers' service records. These records are subsequently examined and checked. Vaccination and inoculation are required for all men under 45 years of age.

Another officer has charge of venereal cases, he prescribing and supervising all treatment, keeping an accurate account of each time that a man comes up for treatment. If a soldier fails to report for treatment or if it is discovered that a man has become infected and there is no memorandum of his having availed himself of prophylactic measures, it is reported to the commanding officer, with a request that charge be preferred for neglect of duty. All men having venereal diseases are restricted

to the confines of the camp as long as they are in an infective stage.

Also all men of the command are inspected twice each month for evidence of disease, especially venereal, and also as to their personal cleanliness and the condition of their feet. Men working in the kitchens or messes are inspected every week and those having venereal disease are not permitted to do work there, even though they have no open lesions.

Now and then special lectures are delivered, mostly by the surgeon, these covering personal hygiene, with particular reference to sexual diseases. Still another medical officer is detailed to visit the sick in hospital, to familiarize himself with the progress and treatment of the patients. The same officer also daily investigates the men's quarters, inquiring about the sanitary conditions and whether or not the men marked "quarters" are playing anything more strenuous than checkers. It has occasionally been found, for instance, that some men excused from even light duty, on account of illness, pass the time playing a corking good game of indoor ball. Also some men, while sick, have a fear of being sent to the hospital, and, so, do not report for treatment, but, manage to remain in their quarters without proper authority. More than one case of contagious disease has been discovered under such circumstances.

The opportunities for purely professional work in a regimental detachment are, to my mind, largely a matter of making the best of the material and facilities at hand, and illustrate what once was remarked about research-workers; namely, that some men can not begin work without a lot of apparatus, while others, such as, for instance, Professor Jaques Loeb, of the University of California (I think it was) can take a cigar-box and a piece of string and with this outfit make an important discovery. On the whole, though, I think we are better equipped than the average civilian practitioner and have, in addition, the facilities of the base hospital and its laboratories at our command for aid in diagnosis.

As the question of expense, either to ourselves or the patient, does not have to be considered, we are in a position to avail ourselves of every possible aid to diagnosis desired, such as cystoscopy, Roentgen-rays Wassermann test, and so forth. We en-

deavor to make an accurate diagnosis of every case and frequently consult with one another, while on occasions we call upon the specialists at the base. Twice a week, the medical officers convene for the discussion and examination of cases that present unusual features or are difficult of diagnosis; more particularly so when we wish to recommend a man for discharge because of disability.

In the matter of treatment, our facilities are limited to certain drugs and combinations, the amount and extent of which is specified by a supplies' table given in the manual of the medical department; and, while one can find the really necessary drugs and appliances, yet, to one who is accustomed to the facilities of a well-stocked pharmacy, that variety which makes for gunshot prescription writing is missed. However, as treatment is so much of an individual matter and, as one man will consider available material too limited and another can do most anything with opium, iodine, and aspirin, it would seem that the government has done a little better than striking a happy medium. A little ingenuity and a knowledge of pharmacy are of very considerable assistance in getting all the possible good out of what is offered us. The average number of patients treated per day is about 40, of whom perhaps not more than 6 to 10 are not doing duty.

Sanitary inspections of the camp in general are made by the surgeon himself. It can not be imagined that he is a very welcome visitor, as he "snoops" around in the kitchens, bath-houses, latrines, quarters, and other places with his little notebook in hand, jotting the things that do not please his sense of the esthetic. The jottings are handed into the commanding-officer's office, who in turn gives them to those officers having direct charge over the places inspected.

It may be remarked, in passing, that one gets splendid cooperation from the line-officers, who are surprisingly keen about such matters. It would seem that we have but one object in life, namely, to keep down the noneffective rate of a command to little or nothing. This consummation, devoutly to be wished, is aided and abetted by the division surgeon, who weekly publishes a bulletin showing the noneffective rate of each organization in the camp, as also a



burning ambition on our part to top the list with the lowest percentage.

While it is a source of pride that we have so topped the list on a number of occasions, there is yet a fly in our honey. Ours happens to be a regular organization, and, though 95 percent of the men enlisted about last June, though two-thirds of the officers are graduates of the training camps, our medical officers are, comparatively speaking, neophytes, and, despite some other factors not necessary to mention here, accomplishments are credited to the fact that this is a regular organization. Thus does a reputation submerge our individual capacities and crowns instead a tradition. Which very probably is as it should be.

The purely military part consists in equitation, foot-drills, setting-up exercises, and litter- and ambulance-drill for all enlisted men and officers to the extent of at least two hours a day. The enlisted men also are given instruction in first-aid, hygiene, bandaging, drug action, anatomy, physiology, nursing, and clerical and dispensary work. It must not be supposed that all this goes on without a hitch, for, as in Robert Burns's famous stanza, "the best-laid plans o' mice and men gang aft agley", so with

our work. A schedule of the week's work is shown herewith:

Daily: 5:45 a. m., first call; 6:00 a. m., reveille; 6:05 a. m., assembly; 6:15 a. m., sick-call; 6 to 6:30 a. m., police of quarters and arranging of bunks; 6:30 to 7:30 a. m., breakfast; 7:30 a. m., equitation, stables, police of infirmary; 3:30 p. m., water and feed animals.

Daily, except Saturday and Sunday: 10 to 11 a. m., foot-drill and setting-up exercises for enlisted men and officers; 11 to 12 a. m., lecture for enlisted men.

Daily, except Wednesday, Friday, Saturday, and Sunday: 1 to 2 p. m., lecture for enlisted men; 2 to 2:30 p. m., litter-drill for officers and enlisted men.

Wednesday: 1 to 3:30 p. m., march or pitching shelter-tents for officers and enlisted men.

Friday: 1 to 3:30 p. m., general fatigue for Saturday inspection.

Saturday: 11:00 a. m., inspection of men, equipment, and quarters. Afternoon, holiday.

Every night except Wednesday, Saturday, and Sunday, 6:30 to 8:00 p. m.: clinics and demonstrations at base hospital for officers only.

## Impressions of Military Medical Service in the U. S.

By MILES MEDICUS, Somewhere in Camp

ONE of the surprises to a physician, after he has got beyond the stage of unfamiliarity with routine duties and of finding everything different from usual, is, the number of surgeons required for a given number of men, especially when one considers that the lay population, so to speak, consists of persons of the sex and age commonly regarded as least liable to disease, and with the defectives already weeded out. For example, 1 physician to every 600 or 700 laity—our peace experience for the last thirty years or more—has meant an overcrowded profession, working at the economic disadvantage of relative unemployment. On the other hand, the present military ratio is about 7 surgeons to every 1000 soldiers; and the experience in Europe

shows that a ratio of 10:1000 is necessary. Offhand, one would say that the explanation is either red tape or the maintenance of a staff up to the emergent requirements of a battle, with most of the time very leisurely occupied, or else that the surgeons, like the troops generally, are not actually at work, but, merely in course of training.

To a certain extent, these explanations are correct, although not to the degree nor in the critical sense that might be supposed. With the exception of the newest and youngest members, virtually the whole of the regular-army medical staff as it existed up to the declaration of war, the senior medical officers of the national guard, and a considerable number of the medical reserve

are and will be occupied with executive and clerical duties, and do not and are not going to deal with patients directly. At least 1 of the 10 surgeons will be thus occupied.

#### As to Red Tape

Anyone with no military experience at all will immediately suggest that such waste of energy should call for the cutting of red tape and the relegation of nonmedical duties to cheaper, nonmedical labor. One with slight military experience, such as the writer, is unable to offer a satisfactory explanation to the contrary; entering into detail, however, it may be stated that the management of a railroad demands the experience of a man who has the ability to serve as a conductor or engineer or in some similar capacity, and that the same general principle applies to the management of a large farm, a factory or a business of any kind.

Cutting red tape means just the same thing as dispensing with the ordinary, gradually developed methods of running any business. The more intimately one knows the military or any other business, the more he appreciates the folly of this criticism. Even if the exact reasons are not fully comprehended, we can not fill the place of the surgeon-general with a layman and liberate his personal services for inspecting latrines and draining and oiling swamps, nor can the high-rank, experienced men of the regular-army medical corps be set to work removing appendixes and applying Dakin's solution to wounds.

It is perfectly true that, as in private practice, military medical men are not literally overworked in ordinary times in cantonments. The staff, though, must be equal to the peak load of an emergency. For example, for three or four weeks, the writer averaged about sixteen hours a day, attending to about 50 patients, rapidly changing; he could not maintain this degree of economic efficiency for any long period, but, even in the slack times, he earns his salary at a far lower fee-schedule than pertains to civil practice, with the maximum allowance for failure to collect. In one camp, during an epidemic, until more help could be obtained, each surgeon had nearly 300 patients, and would, of course, give personal attention only to the worst cases.

Medical men in training, but, without actual patients, do not exist. The nearest

approach is in regimental surgeons and those in command of ambulance companies, and so forth. The former, even in cantonments, have a good deal of strictly medical, surgical, sanitary duties while the latter have enough to keep their hand in.

The executive, clerical, administrative, and commanding duties occupy something like 10 percent of the medical staff, or another 1 of the 10 surgeons per 1000 troops. Such duties as a rule are rotated or the men are called for consultation or advice in regard to strictly medical and surgical problems sufficiently often and with sufficient need to make their salaries seem small in comparison with the value of professional services rendered. In particular, the clarifying action of a regular-army surgeon, in an administrative position, called to consider some problem requiring decision as to malingering, proper disposition of a case, the conditions liable to develop from exposure, and the like, though interrupting his duties only for a brief time, may intensify greatly the economic value of the services of a professionally well-trained reserve officer without military experience. The attempt to keep the high-rank, regular-army surgeon in the operating-room or medical ward would be the greatest possible economic blunder.

#### As to Infectious Diseases in Camps

The fact remains, however, that, even without military casualties, except the occasional accidental shot-wounds, falls from horses, automobile accidents, and the like, the ultimate base-hospital care for troops in cantonments requires a staff of from 1 to 3 per 1000 men, averaging considerably more than the number of physicians in private practice to care for a laity of both sexes and all ages, without preliminary exclusion of defectives and diseased and, at that, not, by any means, occupied to the degree of securing an adequate employment and livelihood, on the average. In a base hospital, 1 surgeon per 1000 men in the command could just about do the amount of work necessary in a dull period; 3 would be required, working to the limit of endurance, in a busy season, and even this number would not be physically able to withstand the work of combined epidemics of moderate severity of several common infections.

This is a curious paradox, but, susceptible of explanation. In the first place, the

quarters properly provided for troops in training are not comparable in comforts with ordinary homes. Moreover, while in civil life, almost anyone can lighten his labor so as to conform to temporary diminution of strength or minor disability, this is not possible in military life. Home nursing and domestic medication that we must admit to be adequate for a considerable number of mild affections, though theoretically and occasionally practically dangerous by neglect of scientific medical care, are lacking. Hence, anything approaching a severe cold, bruises, strains, sprains, mild exanthematous attacks, and a great variety of minor affections that in civil life do not receive professional attention at all or, at most, call for but a single visit, demand hospital care; and it scarcely is necessary to add that reasonably thorough routine examinations and records of treatment could not be eliminated without violation of general rules of procedure and actual danger of serious results of neglect. In the aggregate, this group of cases necessitates a considerable excess of military over civil professional labor.

Another reason for the need of a large professional staff is, that camp life involves etiologic factors of disease contrary to our preconceived notions, which are based upon brief experiences in summer, with recourse to hotels or houses or breaking of camp if cold, rainy weather sets in, or which may be based on outdoor life in shacks on sanitarium grounds. No part of continental United States is, in any sense, tropical or even to be compared with that of the corresponding latitudes of western Europe, for which the Gulf Stream affords an advantage equal to 10 degrees of latitude. The past winter has been unusually severe, so that even the southern camps have subjected troops to degrees of cold such as 90 percent of them have never endured before, except for brief periods between the warmth and dry air of homes and places of business. To an extent scarcely realized, the men even have been in the habit of taking refuge in the homes of friends, in stores, and in every kind of public buildings whenever duration and intensity of cold made them uncomfortable. From the practical standpoint of acquired hygienic needs, fresh outdoor air is not an unmixed blessing and the toughening process considered necessary has, undoubtedly, led to a large amount of minor

catarrhal inflammations and has even predisposed to actual infections, such as pneumonia, possibly tuberculosis and diphtheria.

The incidence of what ordinarily are considered children's diseases, notably measles and mumps, and to a less degree scarlet fever, varicella, and roetheln, has been as high as  $1\frac{1}{2}$  percent of the total strength of a division in a single week for measles, although after such an epidemic the incidence has declined rapidly and thereafter remained practically negligible. The same phenomenon, although on a smaller scale, has been observed for other exanthemata. As the troops represent about 10 percent of a normal fairly fixed population of both sexes and ages, a divisional cantonment of 20,000 to 30,000 corresponds to a city of between 200,000 and 300,000 population.

The question as to whether the occurrence of camp-epidemics of what are termed children's diseases is merely the result of aggregation of numbers may be answered, Yankee fashion, by another question. Given a massive epidemic of measles in such a city, should we have from 200 to 500 cases occurring in healthy male adults of between 20 and 30 years of age, and, presumably, an equal incidence among young women, and smaller but corresponding incidences among men and women of greater age? To combine the parts of the question, has any American city of 200,000 to 300,000 population ever had, in a single week, some 1000 or 2000 cases of measles among adults? Cantonments do not provide exhaustive reference-libraries, however, the question can, in all probability, be answered in the negative. If this answer is wrong, the popular and professional opinion, that measles and other exanthemata (excepting smallpox for peculiar reasons depending upon general vaccination) are rather rare among adults, should long ago have been corrected. The explanation of the occasional high incidence of the exanthemata, especially measles, among soldiers, may follow several lines. It is possible that the clinical diagnosis does not represent a single specific infection, or that the generally accepted belief, that, with rare exceptions, lifelong immunity follows an attack, is a mistake, or that these diseases skip an unrealized proportion of the upgrowing generation.

Whether these hypotheses be correct or not, the fact must be accepted—best expressed in rather oldfashioned terms—that

the virus of these contagious diseases is greatly increased by aggregation. On the other hand, the inevitable exposure to cold, which has been adduced as an explanation of the tremendous mortality of these diseases when introduced from Europe among the Indians and other aborigines formerly free from such infections, has not proved to be a serious factor. Neither is the generally accepted notion, that the exanthemata are especially fatal in adults, supported. The mortality for ten weeks, for about 750,000 troops (the number varying from week to week), was 14 from measles and 8 from scarlet-fever, none for the other exanthemata, the susceptible material being, apparently, nearly exhausted.

#### Importance of Repair Work

Another, perhaps the most important reason for the large number of surgeons required is, the enormous amount of what may be called repair work done. This involves several apparently distinct phases; however, it may generally be defined as professional care designed to remove, immediately, diseased conditions in the most extensive sense, which in civil life would be largely neglected, subjected to professional or lay palliative treatment, very gradually and not universally subjected to radical treatment, after years of more or less handicapping of efficiency, sometimes with spontaneous though gradual cure, sometimes with constant adaptation of the patient and his environment to the limitation of his disease, often resulting in spread of infection to others or to indirect handicap of the efficiency of others when the condition is not at all or not practically transmissible.

For example, tuberculosis: While this disease is on the decline, this diminishment is almost exactly that of the aggregate mortality, so that, as for many years, just about 10 percent of all deaths are owing to it. It is not surprising, therefore, that somewhere up to 1 percent of all troops, even after the preliminary and necessarily somewhat cursory examination, should, on thorough examination, be found to be suffering from this disease in some stage or to have suspicious degrees of exudation, or should develop active from latent foci under the stress of camp life. The great majority of this number—varying from a fraction up to 1 percent of the troops—are, by no means, in danger of dying of tuberculosis, espe-

cially when we consider that they are well on the road to recovery, well nourished, and thoroughly instructed in the means of cure and prevention by the time they are discharged from service as a precautionary measure before they might be subjected to exposure, including that of considerable contagion, in foreign service. Obviously, to go over an army with a fine-toothed comb to detect such cases, requires a disproportionate professional force, while at least one surgeon to a division is required merely to treat the cases detected and awaiting discharge.

#### The Venereal Menace

Another group of diseases logically included under the head of repair work, though not at first thought likely to be included in this category, is, venereal diseases. The vast amount of worry as to the venereal peril of military life, under present conditions, amounts simply to the fact that the sociologic ostrich has pulled its head out of the sand, taken a careful view of what confronts it, and has kicked hard and continuously and pretty effectually against the danger.

The venereal peril of military life has proved to be simply the peril carried over from civil life. Without entering into figures, the regulars had a relatively small initial venereal incidence in the fall, which has declined moderately; the national guard had a high incidence; the national army had a still higher incidence—which undoubtedly represented what our male youth has had for a number of years. All of these incidence rates have been reduced to about that of the regular army, that is, to the practical minimum under existing conditions.

Mobilization, instead of increasing, has reduced the venereal peril, in four or five months, to about a third of what it was. Moral prophylaxis has been given an efficiency such as it never could have had in peace; and this has required medical manpower.

However, quite aside from moral prophylaxis of the kind so pregnant with oratory and literature, or police prophylaxis, which starts with the female, there has been the military prophylaxis, which does not hesitate to appeal to a man's calculating intelligence as well as to his better nature and which literally pens him up till he is no longer a source of infection, and which, even with an occasional slip of the machin-



ery, scarcely gives him the chance to convey infection after accidental reinfection. Nor must we forget that, under modern conditions, venereal diseases are as curable as most other infections, even of mild type; allowance, of course, being made for late stages, which are incurable, even fatal within a short duration, although not markedly liable to transmit the disease further.

A third group of diseases under the general head of repair work includes chronic involvement of the appendix, hernias, actual or potential, various other really dangerous conditions commonly undiagnosed and untreated in civil life till the matter becomes emergent when it often is too late to save life. Of minor moment, so far as actual mortality is concerned, although not, by any means, without danger, are conditions such as flat foot, badly united fractures, hypertrophied tonsils, goiters, carious teeth, defective eyes and ears. All of these (and the entire list is much longer) not only require considerable man-power, but, they explain why the trivial complaints scarcely ever reaching the private physician at all require the seeming waste of time involved in careful examination and paper-work. This seeming waste of professional energy, as a matter of fact, is one of the most practical ways of raking over the youth of our country and of preventing ultimate serious disease and of removing handicaps to efficiency in civil as well as military life.

A fourth group of conditions properly included under the head of repair work, though, unfortunately, only to a slight degree in the literal sense of individual curability, is highly analogous to tuberculosis in regard to the amount of labor involved in finding the material. This group also well illustrates how ostrich-like our attitude has been in the past. Allusion is made to the detection of neurologic and, particularly, psychiatric cases. Nearly 1 percent of all troops come under the broader classification,

and the great majority of this percentage under that of congenital, unrelievable states of mental deficiency.

From the military as well as the humanitarian standpoint, it is worth the medical labor of detecting and excluding these unfortunates from military service. The still greater value of this work may or may not be achieved, according to whether local civil authorities follow up the work by placing defectives under supervision, differing in kind according to degree and individual circumstances. At least, the military service has, for the first time in history, thoroughly demonstrated the seriousness of the problem and has put it squarely before the civil authorities, to take it in hand or to continue to neglect it.

Without attempting the exhaustive—and to the reader the exhausting—task of enumerating all the reasons why the troops require so large a number of medical men, even before the actual traumatism of war occur, there is one further thought:

Granted that the males of military age (20 to 30 years) show, on the whole, the lowest mortality of all the population, do they really have the resistance to disease—and to death, though not immediately occurring—ordinarily ascribed to them? The writer has long doubted this idea of the high resistance of young men, and his military experience increases his former skepticism. It is no uncommon experience, either in civil or in military practice, to see the physician busy with the care of the sick, especially in epidemics of respiratory infections, when he, himself, is sicker than the average patient. It is probably no more characteristic of the military surgeon than of any other soldier, but, more conspicuous, because of the far greater proportionate number of middle-aged and even elderly physicians engaged, to note the greater "toughness" of the man decades older than the age-limit of the rank and file.

## The Management of Measles

By C. M. HUNT, M. D., Brevard, North Carolina

THE anxious parents ask, "What is the matter with our child, doctor?" "O, nothing, just a case of measles." And, then and there, the worthy Doctor of Medicine surrenders to the laws of gravitation his

saccharine substance—in classical language, he "drops his candy." However, the doctor should not lose sight of the fact that the diagnosis, treatment, and prognosis in a case of measles always are of vital impor-



tance, that frequently the disease is very serious and often fatal, and that even if in a given case it does not prove fatal, it often is followed by sequels that may affect the system for life, laying the foundation for serious and even fatal affections in the future; also, that the rash, of whatever degree, does not constitute the disease, but, that the attack is a serious systemic affection. Each symptom and condition should be diagnosed with care and skill, and each and every symptom be treated promptly as it arises, in fact, when possible, should be anticipated and met by prompt preventive treatment.

Many a little grave lies in the country church-yards, their little shafts glittering in the moonlight, testifying to "only a case of measles." Ah! and many larger graves containing the remains of the father or the mother of a family, surmounted by solemn, silent shafts, are the mute witnesses to the family's loss because of a doctor's "O, nothing but a case of measles."

The treatment of measles is to be selected according to the views and successful experience of the individual physician; weighing carefully all of the symptoms and taking into consideration the family history and the personal equation of each individual patient, considering each as a patient, not as a "case".

In my opinion, what follows includes a few of the important points to bear in mind. Of course, there must be a good nurse, a proper room, ventilation, medium temperature, and things of that kind go without saying.

#### Prevention of the Disease

Isolate the patient. Render his body as aseptically clean as possible. Keep the mouth, throat, and nasal passages sprayed with an antiseptic solution, repeated frequently. Keep all of the organs of elimination in an active condition. Keep the system saturated with calcium sulphide. I do not believe that anyone will contract measles at all, or if so, only in a very mild form, if the system is saturated, before exposure, with a good preparation of this drug.

I have heard from professional brethren, and fully believe myself, that an ideal method of keeping the nasal passages clean is, to use frequent (every one to two hours) sprays with chlorazene and to follow these

twice daily (night and morning) with a 1-percent spray of dichloramine-T-chlorococaine oil, so as to prolong the germicidal action, especially at night. Inasmuch as it is now acknowledged that measles is conveyed by the discharges from the nose and throat, this treatment should be ideal; and I believe that we are justified in expecting, and claiming, that it will arrest the spread of the disease.

The oldtime extemporized chlorine mixture [also called *euchlorine*] is an excellent local and internal antiseptic, in this and in all other zymotic diseases. Here is my formula: Take of chlorate of potassium, 40 grains; hydrochloric acid, 220 grains. Put these into a 16-ounce bottle and cork. When the fumes of chlorine begin to fill the bottle, pour into it 1 ounce of water, shake gently, then adding water till the bottle is full. Then cork tightly and keep in a dark place. (This mixture sometimes is explosive.) The dose for adults is from 1 to 4 teaspoonfuls, properly diluted.

#### Treatment of the Patients

First place the patient into a quiet room well ventilated, neither too hot nor too cold. Insist upon quiet—the nervous system is profoundly affected in measles. By this means, grave complications may be prevented, such as headaches, delirium, and meningitis, from congestion.

The care of the *eyes* is all-important. Give the eyes perfect rest, in a darkened room. Bathe the eyes frequently with a hot boric-acid solution during and a long time after convalescence. The eyes must receive watchful care and attention.

*Fresh air* is most important. Avoid draughts and cold irritating air in cold weather. Warm and tempered air in cold weather is just as healthful as cold irritating air and saves an unnecessary tax upon the sensitive air-passages and lungs.

*Food* should be carefully selected and given in proper amounts, at proper and regular intervals. Till the high temperature subsides, avoid solid food. We may give mutton-broth, Horlick's malted milk (avoid cow's milk at this time—as in all diseases where there is a high temperature), liquid peptonoids, chicken-soup, beef-soup, beef-extract made from a nice piece of beef (do not use the beef-extract in jars from the drugstore); later, butter, cream, grits, corn-gruel, corn, jelly, junket, milk (sweet

boiled) milk-punch, orange-juice, rice (well cooked), rice-gruel, squirrel-extract (i. e., an extract made from a squirrel, the same way that beef-extract is made). This is the best food for any sick child in all diseases, especially good in all bowel and stomach troubles. For irritation of the throat, the white of an egg, beaten up stiff, with a little sugar, is very grateful and nourishing.

*Water* should be cool and given frequently; to be boiled when there is the least suspicion as to its purity. When boiled, it should be cooled, using ice if necessary; but, it must not be given below an ordinary cool refreshing temperature. In all affections of the air-passages, avoid iced drinks, ice-cream, and the like.

*Circulation* must be equalized. Avoid congestion and stasis in each and every organ, especially the brain, lungs, and kidneys. The brain must be protected from congestion. If necessary keep the head cool by applying compresses wrung out of cold, even iced water, frequently changed, to prevent insomnia, delirium, congestion of the brain, and so on. The *temperature* should be kept down as near to normal as possible, but, must not be forced down to the extent of weakening the patient.

Bodily functions must be kept at a free normal pace. *Elimination*: I repeat that all organs of elimination must be kept active.

*Coated tongue*: Give small and properly repeated doses of calomel, followed the next morning by castor-oil and oil of turpentine.

*Clean out. Clean Up. Keep Clean.* For a collection of mucus in bronchial tubes and mucus and bile in the stomach, a few doses of a well-selected emetic will do great good.

#### Sequelae

Every case of measles should be considered a potential case of meningitis, pulmonary tuberculosis, or acute or chronic pneumonia—the latter of the areolar hyperplasia type. Here, the hepatized consolidated areas later become caseous, break down, cavities form, and pulmonary consumption develops even years after the primary disease of measles.

I once was called to treat a young man with a pronounced acute pneumonia in the right lung. Upon examination of the left lung, I found an old congestion, great dullness on percussion, consolidated areas, hardly any expansion. I called the patient's

attention to this condition and told him that he had suffered, for I did not know how long, from shortness of breath, undue weakness from exercise, and so on. He acknowledged the truth of my statement, and we counted back, guided by the symptoms and the length of time that they had existed, to two or three years, when he had suffered from an attack of measles. This lung was left affected by neglect of proper after-treatment. This lung gradually responded to treatment and cleared up later.

Keep the lungs and bronchial tubes as free from mucus as possible; do everything possible to prevent congestion and stasis; examine the lungs daily, also several times for a month or two after the patient seemingly has recovered. I repeat, examine the lungs carefully and frequently, to see if there are any congested or weak spots.

Institute counter-irritation of the lungs, in the latter stages of measles or during convalescence, when needed—and it is needed much more frequently than is generally imagined. For adults and large children, use mustard plasters, made of plain mustard and water. Do not add white of egg, flour or vinegar—the latter weakens the mustard. In an obstinate case, when mustard will not blister, use a fly blister. Open the blister, catch the serum on absorbent cotton, and apply a thin cloth dipped in melted hog's lard. Put on a fresh dressing before the first one gets dry and sticky. Blister repeatedly, if it is necessary to clear up congested areas. This also will loosen the phlegm and lessen the cough, if the patient is "left with a cough." For babies and young children, use a mustard poultice, made of mustard and flour 1 to 2 parts of the former and 3 or 4 of the latter. Make it strong enough to redden the skin deeply, and repeat as often as needed. Where the mustard has not been applied or in cases where it has not been needed, apply frequently to the chest and rub in well equal parts of camphor and mutton suet, and a little oil of turpentine, if desired. Never apply antiphlogistine over a weak lung, one struggling to pump the air in and out—the weight is injurious and often deadly. By the excessive weight, the air is gradually pressed out of the lungs and congestion favored. You will see and feel how it works if you will lie down awhile with a

grindstone on your chest and try to draw your breath.

Medicated air in bronchial troubles is very helpful and grateful to the patient. Select anything desired. One great plan is, to fill the room with the fumes from slaking lime. By so doing, great benefit will be given to all diseases of the air-passages, good in certain stages of measles, croup, and so on. The fumes are cleansing and antiseptic in effect. Take a lump of unslaked lime and put it into a big tin bucket containing a little water, or frequently pour a little water on it. If desired, the fumes can be collected and guided directly to the patient's nose and mouth, by using a large long funnel, or a paper horn, made by rolling a large piece of paper or several newspapers. Place the large end over the bucket and the small end near the patient's nose and mouth, avoiding holding it too near if the fumes are too strong or hot. Besides, the patient, nurse and lime-pan can all be covered tent-fashion, by throwing quilts around them.

#### Medication

I suggest as a few of the remedies that I have found useful in the different stages of measles the following: cough-medicines and expectorants, infant-anodyne granules, emetoid, apomorphine, specific medicine of lobelia, fluid extract of ipecac, ammonium iodide, ammonium chloride—to mention the more prominent ones.

To "keep the eruption out" and reduce fever: aconitine and sodium salicylate. Either one is good alone. Together they are synergistic. If the temperature remains obstinately high, substitute for the aconitine the defervescent-compound granules. When the aconitine and sodium salicylate are given, pilocarpine will not be needed for delayed eruption. Echinacea is good to give together with the calcium sulphide.

As tonics, give triple arsenates, nuclein, pure port wine. To sustain the heart, give cactin, strychnine, brucine. If for any cause during convalescence the patient is

very weak, apply pure warm corn-whisky (adults, one to two tablespoonsfuls every one to two hours), not enough ever to stimulate, but, small quantities frequently and regularly repeated; just enough to keep the strength up to a certain mark and help nourish the patient. Rub the whisky on the legs, back, and abdomen, all of the largest surfaces. I have known this application of whisky to keep an exhausted patient alive for four weeks with no food taken during that time, and a good recovery resulting. I have known it to sustain the heart and nourish a great many patients. This is a fact, though scientists and many doctors claim that it depresses the heart, that it is a narcotic, that it does not stimulate or nourish when used as a medicine.

For pains and aches in measles, give specific medicine of macrotys and bryonia.

Prevention of measles in the camp: When sent to the camp, quarantine each unit the proper time, to see if any are taking measles before they are allowed to enter the camp proper. All the same, these men are very liable to contract measles later. So, were I medical director, I should have each unit to be sent by each drafting board detained in a camp at home. I should expose this bunch of men to measles till they all, so far as possible, had contracted the disease, then would send the latter home for home care and proper treatment, till they recovered. By this means, we should be certain that the disease of measles would never be in the army, with its long death-list, troublesome care and treatment, quarantine, etcetera.

It can be properly objected that this plan would give the disease to some who otherwise might not have it. This is, or may be, true; but it would be doing the greatest good to the greatest number, at the expense of the few. And, it is a certain fact that, if we prevented this disease in all of the armies, thousands of valuable lives would be saved (and could have been saved), to say nothing of the inconvenience of this disease, the medical care, quarantine, and all else in camp.



# On the Treatment of Morphine-Addiction\*

By H. E. GOETZ, M. D., Knoxville, Tennessee

**O**PIUM-ADDICTION no doubt dates back to the introduction of this valuable drug to man. Many beautiful stories have been recited as to the discovery of this drug, one that I remember reading some years since having been translated from a foreign tongue, telling of a certain knight who visited India on a hunting expedition and the servants making his bed of the leaves of the poppy, which grew there in profusion. The pleasant dreams that accompanied the knight's rest caused him to return many times to sleep on the same kind of bed, and to bring along his friends likewise to enjoy it. Doubtless the story is a myth, but, somebody at some time discovered its narcotic properties and that it possessed the peculiar ability of pushing away the clouds and sending the taker into the arms of Morpheus in royal style.

Hippocrates undoubtedly used this drug in his practice and recommended it to others, and the medical profession today would lamely attempt to relieve many ailments without this valuable adjunct. China has been affected longest with the opium-habit, and most severely. In 1840, a Chinese diplomat declared that the opium traffic in China amounted to more, in dollars and cents, than did that of the shoes, jewelry, and silk of that great empire; and it was then that China undertook to deal with this traffic, since only a fraction of one percent of its population was not affected either directly or indirectly with this drug. The only source of opium being India, Great Britain objected to the Chinamen curtailing his use of the drug, and the diplomatic row that followed was a long one. Eventually, Great Britain, desiring to test the strength of the Chinamen, shipped into one of the ports a shipload of opium; whereupon the Boston Tea Party was re-enacted by the Chinamen, who threw overboard 300,000 dollars' worth of opium belonging to Great Britain. A war lasting seventeen years followed in which the poor Chinamen lost; being forced to pay an indemnity of \$300,000,000 and to continue the opium traffic. This ended

their attempts to do what England has now done and what the United States is doing in controlling a traffic which meant ruin to their populace.

However, the point that we are most interested in, as medical men, is, the treatment of the patient who has fallen into this habit. I regret that in the past this work has been left, in the main, to the quack and the charlatan. Since England recognized opium-taking as a disease, in 1856, quack institutions, in which opium-addiction was treated, have flourished all over the world, and especially in the United States, while it seems that the medical profession has not made any serious attempt to go to the bottom of this condition, recognizing it as a habit, which should be treated by will-power rather than as a disease with a fixed pathology, which requires medical skill to remove.

In the light of my experience in the past four years, I regard the vast majority of these addicts as curable, when handled intelligently under the system which I am about to describe. There is, perhaps, no disease known to medicine that has, in the past, been as unsuccessfully treated as has drug-addiction. I was recently handed a letter by a superintendent of an institution for the insane which had been written by the physician in charge of a well-known institution where drug-addiction is treated, and in this letter I read: "I have cured this man of the drug-habit no less than five times in the past two years, but, he persists in relapsing." And these continued relapses have caused the profession generally to regard drug-addiction as incurable.

A few years ago, when I became interested in this class of work, I visited the various medical centers in search of information on this subject, and I concluded that the field was one that promised much to the painstaking investigator.

I trust that you will pardon my criticizing here of the treatment that I have investigated, and I first wish to speak on gradual reduction, which is doubtless the oldest system or so-called cure, and only to speak of it in condemnation. It is the

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most inhumane of any of the treatments, in that the patient is never comfortable from the first marked reduction of the doses until the end of the punishment. Like the proverbial Dutchman who cut off the bulldog's tail an inch each day to save the dog pain, he found that the last cut made the dog howl the loudest; and so it is, as Mark Antony put it, the most unkindest cut of all. And it is just after this last cut that Erlenmayer has well described the condition of the patient thus:

"After the withdrawal (the patient) is left in such a condition of physical weakness and mental dilapidation as to be the victim of intolerable suffering and unfit for enjoyment or application to work. He can not sleep, he has no appetite, he often vomits, and he feels so much used up that he will not rise up in bed. His condition continues for a long time and grows worse from week to week. Various attempts at relief prove useless. Morphine is the only remedy."

My own experience would cause me to modify this authority's opinion by saying that his condition grows worse hourly, until the patient goes back to his former habit or dies from exhaustion.

The withdrawal of the drug alone by no means constitutes a cure; the victim being left helpless, with morphine yet in his secretions and toxins produced by morphine, due to its inhibitory action on the liver, spleen, intestines, and kidneys, and, further by benumbing the centers in the brain which presides over the functions of the body—all of which renders him most miserable, so that he presents a picture which words are powerless to paint. His heart's action is bad; he is in a state of unrest; sleepless; his vision reduced; his appetite gone; hallucinations are present; leg and back pains are almost intolerable; and any disease in the entire category may be suggested upon him; and, unless his one panacea for all ills, namely opium, is quickly administered, death relieves him of his suffering.

I was interested a year or more ago in an experiment that was being conducted in a neighboring town by a well-meaning physician, who placed in jail fourteen opium-addicts, in order that he might control them while he administered the gradual reduction-system for their cure. I visited these patients with this physician at his suggestion, and found that at the end of two

weeks not one of the whole fourteen failed to lament at the suffering he had gone through with and avowed that they would go to their favorite drug as soon as released. Some months afterwards, I learned through this physician that they all had returned to their former habit. I do not mean to say that there have not been some cures with this system, for, I remember once reading in the Bible that three fellows were put in a fiery furnace and came out unscorched.

#### The Town-Lambert Course

Some years ago, there appeared in The *Journal of the A. M. A.* an article by Dr. Alexander Lambert, of New York, offering to the medical profession a system for curing drug-addiction, which he stated Mr. Charles B. Towns, of New York, to be the author of. This treatment is pretty well known to the medical profession, and consists in the use of atropine. However, the formula indicates tincture of hyoscyamus and belladonna with xanthoxylon to be given in hourly doses. Compound cathartic pills are administered, with blue mass, and also large quantities of the drug to which the patient is addicted.

I tried out this treatment clinically, following most minutely the details as laid out in Doctor Lambert's article, together with the information that I had gathered from a visit to the Towns Hospital in New York. I signally failed in every case that I undertook, dismissing the victims at the end of the period with apologies for the ordeal through which I had put them, and returned the fees which had been advanced. I observed that this mixture of belladonna and hyoscyamus produced violent delirium in most patients, since atropine is not as rapidly eliminated from the system as one might gather from the authorities. This delirium superinduces exhaustion, which is materially added to by the hourly disturbance of the patient for five days and nights in the administration of the drops, together with the drastic purges. At the end of the period, the patient is exhausted and presents the usual picture seen in addicts where the drug has been withdrawn; and it is just at this point where Dr. Lambert advises us to administer 2 grains of codeine. Remarkable advice from so wise a head! The only portion of this treatment that I can recommend is, the purging (with a modifi-



cation); for, if relief has come to some patients by this treatment, it is due, I believe, to this latter feature.

#### The Scleth Cure

A more recent treatment that has appeared in the columns of the *Journal of the A. M. A.* is that of Doctor Scleth, of Chicago. Published formula, which he says is the "essence" of the treatment, contains scopolamine, pilocarpine, dionin, (ethylmorphine hydrochloride), alcohol, water, and cascara. In discussing this treatment, Doctor Scleth tells us that "scopolamine is one of the atropine series, and in so far as atropine is the physiologic antidote to morphine represents the specific element of the treatment." Just how far this drug is the antidote of morphine, we are not told. Like a great many other drugs, the action of the same is assumed by a great many physicians, because "somebody said so," without ever taking into consideration clinical evidences that would prove beyond a doubt that the action is not what it is laid down. And so it is that atropine is not the antidote to morphine.

Both atropine and morphine produce dryness of the mouth. Both are capable, under certain circumstances, of stimulating the heart. Both are cerebral stimulants and are capable of producing delirium. They are opposite in their action on the pupil, which matters little or nothing to the welfare of the morphine-patient. On respiration, both are dangerous depressors, while in Hare's, we read as follows:

"Atropine is a stimulant to the respiratory centers in ordinary amounts"—[mark you, ordinary amounts, not amounts necessary to impress a (drug-addict)], "but, recent careful study shows that its high reputation as a respiratory stimulant is not based either on clinical or experimental evidence. In many cases, it fails to impress respiration at all. It is inferior in the treatment of opium-poisoning to caffeine and strychnine."

I know good instructors who teach their students that it is positively murder to administer this drug in acute morphine poisoning. The administration of any of the atropine group, be it scopolamine, hyoscine, daturine or atropine itself, in opium-poisoning, either acute or chronic, is irrational, and treatments of opiumism depending upon this drug for their cure or relief should be

classed with that with liquozone. Pilocarpine, another of the ingredients of this formula, is also a respiratory depressor, and, as all addicts are quite likely to have depression of this character during their treatment, its administration in any marked quantity will be contraindicated; and, surely, in quantities sufficient to produce diaphoresis, would be a dangerous procedure. Edema of the lungs is a frequent complication where much of this drug is given, and in addicts, where the vitality is always lowered, this complication is an ever apparent one.

Ethylmorphine hydrochloride, as the name suggests, is a derivative of morphine, and, if given in sufficient quantities, will stop pain, produce sleep; and, in fact, has the same action as morphine. I have substituted it many times for morphine in all forms of opium addiction, with the same satisfying effects. In speaking of this drug in the formula, Doctor Scleth tells us that "the patient receives four grains of dionin a day for the first six days \* \* \* which serves merely as a substitute for morphine," and in the same sense as corn-liquor would for rye-liquor.

And further we read: "It may be remarked at this point, in reply to possible adverse criticism, relative to the giving of one habit-forming drug as a substitute for another, that the administration of dionin for nine days (in diminishing doses during the last few days) is insufficient to cause a new habit and that such contingency actually does not arise." This is about the only point in the treatment upon which the Doctor and I agree. No "new habit" would likely arise, since it would only be a continuation of the old one. Opium is opium, and opium-habit possessed the patient in the beginning as it would in the end.

A little further in this astonishing statement we read: "By the fifth day, as a rule, the patient's desire for morphine is gone." It is not likely that an addict full of dionin would want morphine any more than a drunk full of whisky would want cognac. In speaking of the results obtained under this treatment, "the only abstinence-symptoms of any importance (are) insomnia, vomiting, and diarrhea." Enough of these two will place a patient where treatment for morphine-addiction is unnecessary. We would consider a patient with

either of these in a relatively serious condition, and, if he had all three, the outlook grave. On this point, the Doctor says further, that "the vomiting and insomnia which occur more or less constantly are not due to the scopolamine mixture, but occur in any treatment." I wish to take exception to this statement most positively. These symptoms never occur in our patients under the treatment as we administer it, and we feel that, if we could not conquer insomnia first, that the treatment would be of no avail, as any patient suffering from this affliction is doomed to take up some habit-forming drug to induce sleep.

Of the remaining ingredients in the formula, namely, cascara, alcohol, and water, I will remark that the habit-forming properties of alcohol are too well known to admit of any discussion; so that in my estimation, the only commendable ingredients in the formula are cascara and water, which, if given in quantities sufficient, are good eliminants.

Of the six drugs mentioned, three are well known to be habit-forming, namely, ethylmorphine, alcohol, and scopolamine. Scopolamine and pilocarpine are dangerous depressors to the respiration; indeed, on the whole, the treatment appears so irrational that I have varied my rule and not given it the clinical trial that I have the others.

#### About Luminal

Before taking up the treatment which we have so successfully administered during the past three years to drug-addicts, I will briefly describe the drug luminal. Luminal was first offered to the profession of this country through E. Merck, as a German product possessing the usual chemistry, which means little to the practicing physician. We are told that it belongs to the urea group. What I know of it is that it is a white crystalline powder with a disagreeable taste, and is insoluble in cold water. It is cumulative in its actions, and a dose given may not be effective for some hours following. In therapeutic doses, it does not depress the heart nor respiration. In about three or four percent of my cases, a rash appears, which very closely assimilates scarlet-fever. This rash must not be looked for unless the drug has been given for a period of several days. Some of the German authori-

ties regard this as a toxic symptom, yet, I have not seen any bad results follow. If the patient should become thoroughly narcotized, it means that elimination should be resorted to promptly. I have known of no death from this drug, still, it is better to stay on the safe side. The proper selection of the patient whom you are about to treat for morphine addiction means much to one's future success.

#### As Practiced at the Goetz Institute

Not every patient who comes to our hands with the simplest diseases can be permanently relieved. Morphinism is, by no means, a simple disease; I regard it as one of the most complex diseases, and, therefore, we must select cases properly if we hope to cure. The worst barrier to a cure is any chronic disease painful in character. The next in importance is, heart-disease, and then certain forms of tuberculosis. I have considered Bright's disease a contraindication, and in some stages it certainly is; still, we have successfully treated many addicts thus afflicted. Old age, of itself, is not a barrier, but, old age plus any organic disease would be a barrier.

When we are assured that our prospective patient has no disease that will preclude treatment, we begin with the administration of any good cathartic in reasonable quantity at bedtime, following it up the next morning with a liberal dose of magnesium sulphate. I have, heretofore, recommended large doses of calomel, blue mass, and compound cathartic pills, but this I find not only is unnecessary, but, in many cases, produces extreme exhaustion. While elimination is very necessary, it should be done in reason.

As soon as the bowels have moved thoroughly from the magnesium sulphate, we administer from 2 to 4 grains of luminal; and this we repeat every six hours until the patient is quiet and will sleep if allowed to. The narcotic he has been in the habit of taking is in the meantime administered in the usual manner, or the manner in which he is most accustomed to taking it, and the ordinary dose for him. The patient is kept in this sleeping condition by the administration of the luminal in quantities sufficient, care being taken not to give too much nor to give the dose too fre-

quently, lest we get cumulative action. There is no set time for the withdrawal of the narcotic. We usually withdraw on or about the third or fourth day, and get it all off at one time. The patient is kept in a sleeping condition, usually, for about a week, sometimes a little longer. Of course, he is fed during this period, and, if the luminal is administered correctly, the patient never becomes so thoroughly sleepy that he can not be aroused for meals or to attend to the ordinary functions. The magnesium sulphate should be kept up for some days after the luminal is discontinued.

Electric-light baths will also assist in the elimination, which is necessary, since morphine is found in the urine as late as nine days, and in the liver, brain, and kidneys up to the fourteenth day after the morphine has been discontinued.

During the reconstruction period, good food, exercise, shower-baths, massage, and some form of amusement assist in bringing the patient to a prime condition both mentally and physically, both of which are necessary for an ideal result.

#### Worth Remembering

In treating drug-addiction, let it be remembered that scopolamine, hyoscine, and atropine are habit-forming drugs when given in combination with morphine; that we frequently meet addicts who are fixed in their habit to these combinations and refuse to be satisfied with opium alone; that hyoscine or scopolamine or daturine, or any analogously acting drug, when given in quantities sufficient to impress a morphine addict, will also produce delirium and frequently dangerously depress respiration and heart action; that, chemically, hyoscine and scopolamine are the same drug; that no cure for drug-addiction requiring a patient to remain in the institution less than four or six weeks will relieve your patient of addiction; that the use of opium in any form, substituting for another form of opium, in the treatments of these addicts is a fallacy and results in nothing more than in switching your patient from one track to another, and, to carry a patient through the withdrawal period with heroin or di-onin, not only is unscientific and devoid of reason, but, criminal; that belladonna or any of its kindred alkaloids will not cure opium-addiction, nor are they antagonistic

to opium addiction; that the treatment of these patients outside of institutions equipped for this work is, in the main, unsuccessful, and treatments that would relieve your patients where properly handled would fail when left to be administered by friends or family at home. That all opium-addicts should be regarded as physically and mentally diseased individuals, and that they are entitled to the sympathy of their friends and their physician in the same degree as any other afflicted person; that the home treatments that we have examined depend upon opium in some form for their satisfying effect upon your patient.

In closing, I make a plea for ethical institutions in this work. I regret that the medical profession has, in the past, been prone to take "printers' ink" as their guide in recommending their patients to institutions for treatment. Quacks have flourished throughout the country and have gulled the addict, and are successful only in continuing the unhappy addict in his habit. I sincerely trust that, in the future, more stringent regulations will be enforced by law on all institutions handling this class of work, and that their work be supervised and inspected by proper authorities; and, to this end, I recommend legislation.

[The reading of this paper was followed by a discussion in which several members participated, who spoke substantially as reported below.—Ed.]

Dr. Campbell: Doctor Goetz is too modest to tell you of the results of his treatment. I will tell you some of what I have been seeing every day for the past year at his institution. Undoubtedly, his treatment is most wonderful. I have not known it to fail to cure every patient since I have been observing it. It is the only treatment for morphine-addiction that I have ever seen cure at all. For years, I have been treating these addicts at an eastern hospital and every one that I have handled there during the past twenty years, with a few exceptions, has returned to the drug. I remember one man whom we kept six months and who left the institution voluntarily on a rainy day and immediately obtained a supply of drug and began taking it again. We used mostly the gradual-reduction treatment. I have seen many of these patients we treated at an eastern hospital since cured by Doctor Goetz. His treatment seems to remove all craving for the drug. I have seen and talked with many of these patients who were treated a year or more ago, some two years or more ago, and who undoubtedly are cured and are enjoying good health. The treatment has no

bad effects so far as I can find. The patients do not suffer; they seem to be normal in every way, and certainly those that I have examined closely during the treatment in all stages were in splendid condition—heart action and respiration normal all the while. I have no criticism to make of the treatment; I think it the best treatment known to medical science. I say: All honor to Doctor Goetz for his untiring efforts for these unfortunate people!

Dr. McQuillen: Will Doctor Goetz tell us whether morphine-addiction is the only field in which he has used luminal?

Dr. Williams: I would be glad to have Doctor Goetz state the percentage of cures that actually remained off the drug, and whether there have been any relapses.

Dr. Harrison: I have known this work of Doctor Goetz's in a general way for many months. It is an excellent work, and it seems to me that the hope of the drug-addict lies in this treatment.

Dr. Goetz: Luminal is not on the market any more. We have a supply on hand, which we hope will last us until some more can be brought over. It is made in Germany. Literature on the subject can be had at Merck's. I have used it in many mental and nervous cases with excellent results. I mention insomnia, acute mania, alcoholic delirium, manic-depressive insanity. I have controlled severe attacks of trigeminal neuralgia with it.

I have not as yet treated ten so-called repeaters or relapses, and I am now in the fourth year with this treatment. We have made it a rule to follow up our cases as closely as possible, and I am sure that more than 90 percent are permanently relieved. Of a given number of cases referred by the Associated Charities of Knoxville, all unfavorable risks, we cured all. One afterward died of Bright's disease and one returned to his former habit after remaining off the drug for seven months.

I have been asked my opinion as to the

effect of the Harrison Act on addiction. I hope my hearers will understand my position. This law has made business for every institution engaged in treating addicts, but, in the main, has not relieved the situation. It has been the means of murdering many of the pauper addicts, and some of the others as well. Those who have been unable to buy the drug or take treatment have died; others have been frightened into taking the treatment when they were not fit risks, and they, too, have died. Undoubtedly there should be restrictions on the sale of all narcotics, but, this law, and principally the rulings of Commissioner Osborn, have worked havoc. While I speak of the rulings of the Commissioner, I would mention that Prof. T. D. Crothers says that we must treat by gradual reduction. You have heard my criticism of this method, and I say again that gradual reduction is most inhumane and unscientific, and I do not believe that the courts will uphold the Commissioner in this ruling, which completely removes from the physician the choice of treatment. Perhaps the Commissioner is not acquainted with other forms of treatment, since Keely, at Greensboro, North Carolina, uses, as I understand, only gradual reduction-treatment with hyoscine knockout—the Commissioner of Internal Revenue being at the head of this Keely Institute.

This law has forced most of the addicts who have money to pay for treatment into some institution. They have gone from one to another, seeking relief, but, which they did not find. Most of the cases we have treated have had from one to twenty-four treatments—the vast majority as much as five to ten. One patient had twenty-four treatments in nineteen years and, according to his statement, had never been off the drug habit during that time. He stayed in one institution for fourteen months, without a cure. He has now been off the drug for two years and is in splendid condition and pursuing his profession in the city of Knoxville.

## A Typical Case of Pedunculated Median Prostatic Tumor

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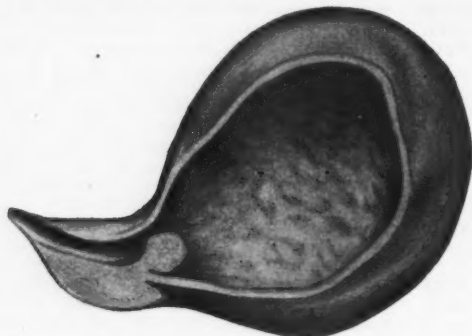
**T**O the general practitioner, who perforce is compelled to rely upon the clinical history of the case and upon rectal exploration for the diagnosis of prostatic obstruction, cases like the following are instructive, particularly as emphasizing the value of the cystoscope.

Case: Patient, aged 58, carpenter. Always well until about two years and a half

ago, when he noticed a little obstruction to urination, with hypogastric and perineal fulness and uneasiness and increased frequency of micturition. These symptoms gradually increased, with the added discomfort of sudden stoppage of the stream during micturition, especially on straining. This particular symptom could be avoided by urination while lying upon the back.

Several attacks of retention had occurred, the bladder finally becoming infected.

Examination per rectum showed an ap-



parently normal prostate gland. Cystoscopy, however, disclosed a smooth pedunculated tumor as large as a walnut, originating in

the posterior median portion of the prostate gland. There was the usual appearance of chronic cystitis, moderate trabeculation of the vesical wall, and a residuum of a little over three ounces of fluid. The patient's condition otherwise was normal. Suprapubic cystotomy was performed and the tumor removed, by slight force, with the index-finger. The growth was literally "wiped" off the vesical neck. The usual drainage was instituted. Recovery was uneventful, micturition being normal by the end of the third week. The urine cleared up rapidly and within six weeks was normal. The tumor proved

to be simple adenoma. The "ball-valve" action of such tumors is readily understood.

## Skin Diseases in the Army

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THE diseases of the campaigning soldier differ considerably in nature and frequency from those of times of peace. Making a tour of the dermatological clinics of the Paris hospitals before the war, one would encounter, as the most frequent forms of dermatosis, eczema, itch, psoriasis, and tuberculous troubles under lupic or verrucose forms. Today, eczema, tuberculids, and itch are rare, being replaced, in order of frequency, by phthiriasis, ecthyma, and trichophytinous diseases, and these frequently marked by varied peculiarities.

During the winter months, what was at first termed frozen feet, but now is called trench-feet, frequently appears. Also, various forms of artificial dermatitis, following unusual expressions of impetigo of the face and sycosis of nonparasitic origin, the subnasal form being particularly frequent. The tuberculids and tuberculosis of the skin are rare. Army Surgeon Milian states that he has seen but one case, and that of the verrucose variety, and no lupus whatsoever.<sup>1</sup> This is not astonishing when one

is acquainted with the rigorous care with which tuberculous subjects were eliminated by the medical examiners.

The army life and exercise in the open air and the nourishment, good in quality and quantity, have greatly counteracted development of mitigated forms of tuberculosis of the skin.

The rapid form of pulmonary tuberculosis has made its appearance from time to time; the chronic form, however, has been notably less frequent than in times of peace. For the same reasons the vesicular forms of eczema are rare.

Phthiriasis has been the disease most common, and chiefly in the acute form, the form so rarely seen in ordinary times. Often the invasion of the parasites is so sudden and so numerous that nearly the whole body will be covered by small edematous papules of the size of a pinhead, almost urticarian in appearance. The papules of excoriated prurigo, with their small black-brown crusts habitually seen in phthiriasis, are the exception. Equally rare is the melanodermy common to chronic phthiriasis. One particular region not

<sup>1</sup> Dr. Milian, *Paris Medical*, May 6, 1916.



mentioned in the textbooks seems to be the favorite site of this acute form which follows the army, and that is the posterior border of the axilla, where the undershirt comes into almost constant contact with the skin; whereas itch ordinarily is found upon the anterior aspect.

The sudden invasion and early care of these cases confined them to the acute manifestations; but, with the more prolonged and exacting service that has attended last summer's campaign, the papules of excoriated prurigo and melanodermy are beginning to appear. Another peculiarity attending this phthiriasis among the soldiers is that they almost constantly present an ecthyma of the legs, and that under a curious form. On the anterior surface of the thigh or side of the leg, or both, there will appear, in groups of two or three, bright-red streaks of the width of a finger and four to six inches in length and resembling a Thiersch graft. They resemble artificial wounds and seen for the first time occasionally have been mistaken for voluntary mutilation; but, the parallel lines, perpendicular, and at a point reached by the hand without effort, marked them as the result of scratching with infected finger nails. They were readily healed by means of antiseptic applications.

Itch has been met with much less frequently than phthiriasis, and when seen usually could be traced to venereal contact being almost wholly confined to soldiers arriving from barracks or returning from furlough or from convalescence. In one or two cases, they acknowledged the sexual contact, but, only rarely will the common soldier admit that he has been with a woman, especially when he has contracted any sort of disease. It seems that the men do not catch itch from each other under ordinary conditions of campaigning, that is, clothed and sleeping side by side in straw or on the ground.

Several articles have been published in the French medical press calling attention to the recrudescence of psoriasis observed among the soldiers, resulting from nervous shock, violent emotion or traumatism. Following the destruction of the "Tèna," one of the soldiers had hospital treatment for a sharp attack of psoriasis resulting from the violent emotion produced by the explosion. A young soldier of 22 suffered an

attack, which appeared generally distributed over the whole body, immediately following his first charge upon the trenches of the enemy. Another soldier, 28 years of age, had an eruption of this disease, generally distributed over the trunk and arms, following the explosion of a "marmite," which knocked him down, but, produced no wounds. In another case, very similar to the foregoing, the man, 38 years of age, was treated in the St. Louis Hospital at Paris. A young woman of 25 presented this eruption immediately following the bombardment of Arras, where she lived.

All, excepting the one last mentioned, gave histories of tuberculosis in their family. A number of cases of this disease have been reported following wounds.

At the beginning of the war, at Verdun, 5,000 or 6,000 head of cattle were housed in crowded quarters, to furnish meat to that vast entrenched camp, and the soldiers in charge of the cattle were attacked by trichophytis, which appeared generally all over the body. During the winters of 1914 and 1915, the disease appeared, in suppurative form, in the beards of the cavalrymen, with voluminous crusts—a form difficult to cure. It spread to the artillery and all branches of the service where the men came in contact with the animals in question.

#### Trench-Feet

Trench-feet is a new disease. At the beginning of the war, as the men came into the hospital suffering from this disease, they were classed as frozen feet, as the malady appears most frequently during the winter and it was supposed that the cold had much to do with causing the trouble. However, it was soon learned that many men were afflicted under circumstances where cold played no part, and then the designation trench-feet came into use, as indicative of the origin of most of these cases. The physical signs are always the same; namely:

The balls of the great and second toes are swollen and edematous; the skin is distended and glistening; sometimes vesicles form, like blisters. The edema may extend to the remaining toes and ball of the foot. In grave cases, the liquid in the vesicles changes from citron-colored to hemorrhagic, and the skin becomes blue-black,

livid, and gangrenous. The patient complains of lancinating pains, which interrupt his sleep, and he walks with difficulty, oftentimes walking on the heels and elevating the toes. The pain is produced at several points, chiefly by pressure upon the head of the metatarsal bone. In the lighter forms, the patient complains of a feeling of fullness in the affected members, which may proceed to a condition of anesthesia, a feeling that the toes are "dead." The lightest form is characterized simply by pain and paresthesia. The trouble appears, as a rule, after the usual period assigned in the trenches and manifests itself when the soldier has retired to the rear for a rest and removes his shoes for the first time in several days. The affection lasts for two or three weeks in the lighter and for from one to three months in the severer cases.

Trench-feet are found chiefly among the men from 20 to 30 years of age. A sojourn in the trenches for at least three days is the chief cause of the affection. This is proven by the fact that those connected with the artillery, who are free from this duty, are not subject to trench-feet. The mud of the trenches is particularly favorable to its development. The constriction of the foot in the shoes for several days and lack of cleanliness play an important role in its causation; still, the exact nature of the malady is yet to be determined. Cold is not generally accepted as the cause, for the reason that it frequently occurs when the temperature is above the freezing point (de Massary). By some, neuritis, due to the humidity, is claimed as explaining the lancinating pains and the analgesia.

A general circular issued by the chief medical inspector-general of the army states that according to Raymond and Parisot the affection is of a microbic origin. The suppositious infectious agents have been isolated from the mud of the trenches by these authors, who have reproduced in animals the various evidences exhibited in trench-feet. The microbes, gaining entrance through the shoes, are believed to penetrate into the feet around the borders of the toe-nails or excoriations caused by the rubbing of the shoe. Complications frequently accompany the malady, such as abscess and lymphangitis. Tetanus has been observed with sufficient frequency to cause all patients arriving in the hospital

to be injected with the antitetanic serum. This cannot be done too promptly.

The treatment consists in frequent bathing in warm water with green soap, and local antiseptic applications. The toes are exercised daily by flexing and extending them. At night, the foot is enveloped largely in soft cotton wadding and a cradle placed over it to protect it from the weight of the bed-clothing.

### Burns

Among the many atrocities invented and practiced by the Germans in this war, none has caused more agony of suffering than that of air-projected flames, flaming liquids, and shells scattering burning liquids when they burst. I never can forget the pitiful and heartrending sights brought before me, during my service in a front-line hospital, from these causes. The flaming liquids brought to bear at short range burn up the clothing, integument, and flesh as snow melts before the sun, and until one of our army-surgeons happily discovered a helpful combination little could be done to relieve the agony of the victims. I here give the composition of this antiburn wax\*:

Sodii naphtholi .....	2 Grams
Olei thymi .....	3 Grams
Olei origanii .....	3 Grams
Olei geranni .....	3 Grams
Vaselini puri .....	1,000 Grams
Paraffini (45-50° C. m.p.).....	5,000 Grams

As soon as possible, every burnt area is carefully sponged with warm water liberally sudsed with green soap, being careful not to break the blisters or denude the parts, then cautiously dried with tampons. The parts now are covered with a single layer of sterile gauze, and this is painted over with the wax, which has been melted by placing the container in water of a regulated temperature. It solidifies as fast as applied. Over this coating, put another layer of gauze and again paint with the wax, and so on until several layers have been applied. Finally, cover with absorbent cotton and bandage lightly. The dressing is renewed each day, the wax covering peeling off readily without causing pain and without disturbing the healing surface underneath. Clean the surface with great care, so as not to denude or break blisters,

\*This paraffin-wax preparation, known as *Ambrine*, is obtainable in the American market under various designations, one of them being *Parresine*.

and special care must be exercised not to disturb new skin formations.

When the inflammation subsides and the parts no longer require this application, then powder the parts with the following preparation:

Powdered camphor.....	20 Grams
Sodium borate .....	200 Grams
Powdered talc.....	200 Grams

Do not be disturbed by the copious formation of serous liquid or pus—the granulations will appear underneath and the healthy repair proceeds.

From the very first application, all pain ceases and the patient is comfortable. I have seen recoveries in most awful cases, in which the victims would have died in twenty-four hours without this treatment.

## Observations on Rectal and Fractional Narcosis

By E. H. F. PIRKNER, A. M., M. D., New York, N. Y.

THE desirability of securing trained anesthetists is apparent, not alone in hospitals, but, to any practitioner who does occasional operations which can not be done under local anesthesia. Unfortunately, the medical schools of this country have as yet not found a place in their crowded curricula for obligatory instruction in the administering of anesthetics as a delicate art and a *conditio sine qua non* for a license to practice medicine. England seems to be the only country in which the professional anesthetist prevails in hospitals as well as in private practice. From my personal observation, I know that one of the foremost medical faculties in Europe, at the University of Leipzig, made, in 1913, the first attempt of introducing a facultative course of lectures and practical instruction in anesthesia; however, the lecturer was so busy with his surgical hospital service, and at such a great distance, that half of the dates he could not keep, so that it fell to my lot, several times, to fill his place, and, when he really did lecture, he was entirely unprepared and bored his audience with useless historical data. Not once did he convey practical knowledge to the students.

Many of us have been in a predicament when they called, as a matter of form, some available physician to administer the general anesthetic and experienced more anxiety for our patient's wellbeing under the ether or chloroform than any complications of the operation could have provoked. The reported dire results and occasional fatalities from the anesthesia are in the majority of cases, undoubtedly, the fault of the

technic or the ignorance of an unskilled anesthetist.

In order to obviate all the difficulties in those cases in which I had not an expert anesthetist on hand in my own surgical work, I developed, beginning in the year 1909, a method of my own, one of rectal anesthesia. When I look over my special records of 37 cases of 1909 and 1910, I find that I had a simple, reliable rectal method that any regular trained nurse could learn in a short time and which always afforded a safe uninterrupted anesthesia sufficient even for any major operation.

In 1910, I reported this method before the Brooklyn Medical Society of Anesthetists, where it was favorably discussed; for, my method was far superior to the rectal anesthesia then demonstrated, as it dispenses with the complicated apparatus which was shown.

In my present communication, I may be permitted to include the observations on fractional narcosis, as I have called the procedure of speeding up complete anesthesia by the occasional addition of hypodermic and respiratory narcosis to the resorptive method per rectum which I employed, however, only in the experimental stage of any work.

In order to stimulate country practitioners, who may be too great a distance from hospital facilities and whose patients are often better cared for at home than in hospitals, to use and learn to rely upon the simple rectal method that has given me excellent satisfaction, and also considering that for the majority of practicing physi-

cians in any locality an expert anesthetist is out of the question, even rarely obtainable, the technic of administering the narcotic is first described.

#### Getting Ready for the Procedure

Whoever has carried out or attempted to make a rectal infusion for application of some medicine to the rectum or colon knows that it requires some patience. The difficulty being, that the medicament rarely gets in place and the infusion spreads over a surface of the colon or rectum large enough for resorption, instead of keeping the infused liquid in the rectum. However, the mere introduction of the tube may meet with obstacles.

Although the knee-chest position is an advantage, making the intraabdominal pressure less, whereby the infusion liquid is sucked in and may be retained for entire absorption before placing the patient into the position required by the operation, I have, with few exceptions, employed the left lateral (Sims) position, and found it satisfactory. It is more agreeable to the patient and devoid of the dreadful anticipation when we work behind the patient's back. In an emergency, when exceptionally prompt preparations are necessary and only one small room available, the knee-chest posture is a decided advantage, some skilful person continuing introducing the rectal anesthetic, which the surgeon directed into the proper channels, while he himself prepares everything for the operation, out of sight of the patient. A moderate Trendelenburg posture will sometimes afford the advantages of the knee-chest, without its disadvantages.

The apparatus needed is simple: a glass (or porcelain) funnel of 100 mils' (about 3 ounces) capacity and a rubber rectal tube No. 28 or 30 Fr. and 37.5 cm. (15 inches) to 40 cm. long. The tubes for sale come, as a rule, 52 cm. long; however, I trim them down to the length which I find most convenient, considering that at least 10 cm. (4 inches) and when we desire to reach the colon at least 20 cm. (8 inches) must be introduced beyond the external sphincter. It is no advantage to use tubes of a bigger caliber, as the resorption from the rectal mucosa requires a certain time, and one must allow for a slow influx. The rectal end should have only one opening—no side

holes. Simplicity being one of the requisites of efficiency, the tube is directly connected with the stem of the glass funnel without intercalation of a short glass tube, which would become necessary, if one insists on using a long tube, for the visible control of the quantity of the anesthetic solution that has passed the sphincter.

"The tube is laid in hot water, ready for use and well covered with a pure oil (stanoilind, interol) or an antiseptic water-soluble lubricant (never vaseline or glycerin) before introduction. It is a matter of course that the funnel and tube must be sterilized in each case according to the most efficient method customary with the operator.

#### The Narcotic Injection Fluid

During the years when I used the here-described method in all suitable cases, I had a standard prescription filled by my druggist, the solution being kept in 10 separate bottles of 50 mils (Cc.) each. The prescription reads:

Isopral .....	80 grains ( 5 Gm )
Ether .....	2 drams ( 8 mils )
Alcohol, absolute.....	3 drams (12 mils )
Oil, pure.....	11 oz. (30 mils )

As each 10 mils of this solution represent 1 Gram (16 grains) of the narcotic, it is easy to increase or decrease the dose by Grams, beginning with not less than 30 mils of the solution: 40 mils (4 grams) being required for the average case; but, 6 Grams of isopral (10 mils of the solution, in addition to the contents of one bottle) can safely be used.

When there is time to prepare a patient for his operation under rectal anesthesia, the entire colon and rectum should be thoroughly emptied and be clean twenty-four hours before the hour set for operation. The method varies, naturally, with the conditions. During these twenty-four hours, I allow the patient only soft and semiliquid diet. On the morning of the operation, an ordinary breakfast can be given, two, better three hours before operating. The rectum is flushed with one quart (or less) of a warm salt solution. If that is impossible because there is no time, it is best to leave the rectum entirely alone, instead of inciting peristalsis, which only would frustrate or delay the infusion of the narcotic solution. A loaded rectum may be

<sup>1</sup>The oil may be omitted, sterilized water being added when required or added to the permanent solution.

cleaned in haste by one large glycerin suppository, the remaining glycerin being washed out with one pint or less of warm water.

#### The Modus Operandi

The very first step in the introduction of the rectal tube may meet with obstacles. Timidity or reflex pain closes the anal sphincter, and the surgeon or attendant must avoid impinging with the top of the tube on the sphincter anteriorly, as the hemorrhoidal branches of the nervous pudendus communis are sensitive to forcible touch. To enter the anus, press the tip of the tube in dorsal direction, or else make an opening by first introducing a gloved lubricated finger, pressing cautiously in a ventral direction, and introduce the rectal tube behind the finger. In some instances, the tube is caught repeatedly in folds of the rectum or by one of the "valves" and stops after penetrating no more than 2 or 3 inches. If it will not advance by aid of the finger, dilation with injected water or inflation with air must make way for it.

Now, assuming that the solution flows freely, which we recognize by the slow sinking of the liquid in the glass funnel, we must observe the caution to maintain low

pressure and allow the liquid to enter the rectum no faster than the mucosa can, according to our judgment, absorb it.

The rate of administration of rectal infusion which I employ is the customary one of proctoclysis of saline solution, or 30 drops to the minute—60 drops being equal to 4 mls entering in 2 minutes, 150 drops equal to 10 mls in five minutes, and 750 drops equal to 50 mls in twenty-five minutes.

Sometimes the influx stops or becomes so slow that it is imperceptible. Then it is permitted to increase the pressure by raising the funnel to the required height. When the end of the tube is caught in a fold (higher up), withdrawing it slightly will correct the position for a renewed free flow. If peristalsis prevents successful influx, one may have to begin over; which, though, happens rarely.

In order to insure the entire measured amount to be retained by the rectum, one follows it with 20 or 30 mls of warm saline solution. As a rule, it suffices merely to withdraw the rectal tube very slowly to make sure that not one drop of the solution is lost.

[To be continued]

## *Believe, O Friend!*

By Edwin Markham

*IMPOSSIBLE* you say that man survives  
The grave—that there are other lives?  
More strange, O friend, that we should ever rise  
Out of the dark to walk below these skies.  
Once having risen into life and light,  
We need not wonder at our deathless flight.

*Life is the unbelievable; but now  
That this Incredible has taught us how,  
We can believe the all-imagining Power  
That breathed the Cosmos forth as a golden flower,  
Had potency in his breath  
To plan us new surprises beyond death—  
New spaces and new goals  
For the adventure of ascending souls.*

*Be brave, O heart, be brave:  
It is not strange that man survives the grave:  
'Twould be a stranger thing were he destroyed  
Than that he ever vaulted from the void.*



# What Others are Doing

## A COMPARISON OF PHYSICAL SIGNS, SYMPTOMS, AND X-RAY EVIDENCE OBTAINED IN PULMONARY TUBERCULOSIS

F. H. Heise and A. L. Sampson, of Trudeau, New York, report in the February number of *The American Review of Tuberculosis* a comparative analysis of the evidence obtained by different methods of examination in pulmonary tuberculosis. They review the varied pathology of the lung in tuberculosis and the probable associated changes of density of the different lesions as assumed to exist as a basis for the interpretation of x-ray plates. By means of the x-ray, some idea is gained of the extent of the disease and the type of pathology underlying the physical signs, giving rise to the local and general disturbances of the system, thus bridging, in part, the gap which is left between the evidence derived from symptoms and physical signs, respectively.

The authors have been impressed with the frequency of cases with clinical evidence of pulmonary tuberculosis without signs in the x-ray plates of gross densities, but, with definite shadows of tubercles in the linear arrangement, concomitant with the pulmonary ramifications. They interpret this as a possible manifestation of a lymphatic pulmonary tuberculosis and infection from the medium bronchi of the lymphatic tract or spaces of the tissue surrounding the medium bronchi and arteries. They call this the peribronchial, or lymphatic, type as contrasted with the parenchymatous or alveolar type.

Dividing the latest series of 235 cases at the sanatorium into these two groups they have tabulated the percentage of occurrence of those symptoms, physical signs and laboratory findings which would in themselves indicate the probable existence of a pulmonary tuberculosis. They conclude from the analysis that there is a type of pulmonary tuberculosis showing

x-ray shadows of peribronchial distribution which is otherwise characterized as follows:

(1.) By the less frequent occurrence of hemoptysis. (2.) By the infrequency of the occurrence (7 per cent.) of tubercle bacilli in the sputum. (3.) By the limited occurrence (3 per cent.) of medium coarse rales. (4.) By the less frequent occurrence of the positive complement fixation reaction. (5.) By an apparently lessened skin sensitiveness to tuberculin.

It would seem probable that this type of lesion has no communication with a bronchial lumen—that absorption into the blood-stream does not take place as freely as in the usual type.

Assuming a justification for the differentiation of the two types seen in the x-ray plates the authors make a further comparison with the usual classification of cases made by symptoms and physical signs.

They find that, roughly, one-half of the incipient cases are of the patchy, or parenchymatous, type. Of the moderately advanced cases, the greater number showed evidence of parenchymatous change. The latter is probably a more advanced or more unfavorable lesion or the expression of a different kind of infection, either as to time or route of infection, or both. The subdivision of incipient cases makes feasible a more accurate knowledge of the type of pathology and probably also of the clinical course.

The x-ray is also found in their analysis to be of great value in the diagnosis of early cases without definite physical signs and as a check upon the physical examination where the lesions give signs limited to dulness, changes in breathing, and increased voice transmission.

### THIN OUT

In these days, when everyone of us is, necessarily, considering the means of meeting the high cost of living, there is a bit

of suggestion to be obtained from a recent number of *The Journal of Agricultural Research*. In the number referred to, experts of the Department of Agriculture consider the relation between their accumulation of fats by cattle and their utilization of the food ingested. While we are not exactly cattle—although it is somewhat difficult to draw the line in the case of some alleged human beings—the conclusion drawn in this article might well be applied in our daily work.

The influence of light and of heavy rations upon steers, before and after they had been fattened, was studied. It was shown that light rations are more completely digested than are the heavier ones, although the difference was not as great as might be expected. Corresponding rations were digested equally well by the fattened and unfattened animals. The loss of nitrogen, carbon, and energy, as well as of methane, was relatively less on the heavy diet. The most important observation, however, was, that it required a correspondingly larger amount of food to sustain the weight of the animal, even when unfattened. If weight of the animals be increased 50 percent, it would require 50 percent more food to sustain this weight, without gaining further increase.

Wherefore, O ye men of steadily expanding equator, you will see that you are paying needlessly for the maintenance of an encumbering and disfiguring longitude and that, by reducing your proportion within the normal of the Greek ideal, you will be able to sustain life, liberty, and the pursuit of happiness with a corresponding decrease of expenditure of pabulum.

#### HORSE MEAT AS FOOD

When conferences are being held as to the amount of whale meat that can be secured to meet meatless days, we recall that these inhabitants of the deep live wholly a cannibal life; when shark meat is quoted at 20 cents a pound, while once their meat was despised, because their source of sustenance is like that of the whale; why then, should anyone shudder at the consumption of equine flesh, when the horse lives only on the richest cereal grains and the most succulent grasses of the plains and mountains of the west, where the air and the

sunshine are the purest and where the valleys and hills are watered by the freshest and least-soiled water of our land?

This question was pertinently asked by Dr. W. H. Hoskins, of New York, at a recent meeting of the Veterinary Medical Association of New Jersey (*Jour. Amer. Vet. Med. Asso.*, April). Continuing, Doctor Hoskins says that it will be better to provide clean and wholesome equine steaks at 15 cents a pound than to hunt sharks, the meat of which costs 25 percent more. Horse meat is accessible in our own country, on our own lands, opening up a vast untouched source of animal food that is rich, clean, wholesome, free from tuberculosis infection. Moreover, the using up of this food supply would afford hundreds of thousands of acres of land, ready for the tilling, to lessen our wheatless days, which are now given up to large herds of horses roaming over the prairies of the western states.

The utilization of the horse for supplementing our meat supply has nothing to oppose it, except sentimental reasons and, as was pointed out in these columns a few months ago (Nov. 1917, p. 841), possibly—indeed, probably—the ancient religious proscription of horse flesh. The eating of this was believed by the old missionaries to be prejudicial to the advance of Christianity, since the animal had been sacred to the gods of Valhalla. Certain it is, however, that the most recent substitutes, namely, whale and shark, offend against the esthetic sense, since both animals are carnivorous; living, as they do, on other fish. Nor are they any cleaner than horses, despite the fact that water is their natural habitat; for, undoubtedly, the horse is one of our cleanest animals, certainly our cleanest feeder. It lives on green grasses, hay, grain, all of which are wholesome and unobjectionable, far more so than is the occasional, if not preferential, diet of the hog, that delights in swill and is not above taking a bite of flesh if it can secure it.

Undoubtedly, we have, in the numberless horses roaming all but wild in our western states, an immense supply of clean, nutritious, and wholesome food that can be made available at relatively small expense, that could be maintained easily enough, and that even would make it possible to provide our armies with additional quantities of meat,

aside from the beef and pork that is being sent over seas now.

Incidentally, we are convinced that the farmers in certain parts of our country in the United States should devote more attention to the raising of sheep and goats for food; but, that is another story.

#### MECHANISM OF THE ACTION OF ACONITE ON THE CARDIO- VASCULAR AND RESPIRATORY APPARATUS

In the therapeutic institute of the University of Naples, a series of experiments were carried on by Dr. A. Chistoni, relative to the action of aconite on the circulatory and respiratory apparatus. The report on his findings, published originally in the *Archivo de Farmacologia Sperimentale* and reproduced in *La Semana Medica* for January 17, is as follows:

The author's observations show that aconite acts upon the heart of the frog, by influencing mainly the intrinsic and extrinsic nervous apparatus, and, in part, also upon the myocardium. The acceleration of the heart beats depends upon the excitation of the accelerator apparatus. The activity of the myocardium is increased by minute doses of aconite preparations and is diminished through relatively high doses.

In mammals (dogs), the subcutaneous injection of small doses of aconitine or of fluid extract of aconite diminishes in a constant manner the number of pulse beats and the average blood pressure.

These phenomena are due to the excitation of the cardioinhibitory apparatus and to the diminution of the excitability of the vasoconstrictor centers. In effect, the slowness of the heart beats may be prevented, in part, by cutting, in the neck, the vagosympathetic nerve-trunks, and completely if atropine is also administered. The electric excitation of the central portion of the sciatic nerve, in conjunction with the asphyxia, increases momentarily the blood pressure, except when the vasoconstrictor centers are absolutely unexcitable, in which case, in order to increase this tension, it is necessary to resort to the intravenous injection of adrenalin; which indicates that the vascular paralysis produced by aconite is of central origin. The transitory acceleration of the heart beats which sometimes is observed after administering preparations of aconite to animals whose vago-

sympathetic nerve-trunks have been severed will be found, in all probability, to be related to the initial excitation of the accelerator apparatus.

The effect upon the isolated heart of mammalia (rabbit) through which is made to circulate nutritive liquid containing crystallized aconitine in proportion of 1:1,000,000, is, greatly to accelerate the contraction, this being followed in a few seconds by paralysis of the heart in systole or by a more or less long period of intense fibrillation of the myocardium, preceding the definite paralysis. Causing to circulate the aconitine in a dilution of less than 1 : 12,000,000 acceleration of the heart contraction is observed, owing to the excitation of the accelerator apparatus. If the circulation of the drug is prolonged for any time, the excitation of the accelerator apparatus is replaced by a depression and even by paralysis of the same.

[This confirms Schmiedeberg.—Ed.]

Excluding, by means of atropine, the influence of the moderator apparatus, one can observe a very great preponderance of the influence of the accelerator upon the heart, as revealed by an increase in the frequency of the heart contractions.

Aconitine does not alter in the least the caliber of the coronary vessels. The contractility and excitability of the myocardium are augmented.

The respiration of mammalia is influenced decidedly by crystallized aconitine as also by fluid extract of aconite, and the modification which the remedy produces in it varies in proportion to the dose administered. Very small doses produce taquinea by exciting the respiratory centers, this lasting for a longer or shorter period, according to the conditions obtaining. Following increased doses, the period of respiratory acceleration is much shorter and soon is replaced by slow and finally absence of respiration. These phenomena have a central origin and result from the depressing action of aconite upon the respiratory centers.

#### THE CONTROL OF BUBONIC PLAGUE

In an article published in *La Semana Médica* of Buenos Aires, Dr. Julio B. Valdes, director of the section of public hygiene, Rosario de Santa Fé, makes some excellent suggestions regarding the prophy-

laxis of bubonic plague as it has occurred in Rosario.

Doctor Valdes says that the great problem is, to prevent the diffusion of this plague by transportation and particularly by the railways. The centers of infection were mostly in the large warehouse districts. In addition to the large quantities of merchandise, the railways transport also insects; they will carry some persons sick with the disease in so mild a form as to escape diagnosis. Also, persons with benign cases of the bubonic pest work in the warehouse where the merchandise is shipped out to various points. The greatest number of cases, according to Valdes, occurred, however, where rats are most numerous.

The first fundamental is, to organize an efficient sanitary force that will destroy the rats, clean and disinfect premises, and watch for evidences of the plague as well as other transmissible diseases, particularly among the workers in the warehouse districts. The rats should be sent to a government laboratory, to be examined, and at the first evidence of infection regular vigorous hygienic quarantine measures should be adopted. The establishment should be closed and hermetically sealed so that the germs of the disease as well as the rats can be exterminated. Doctor Valdes makes various suggestions for destroying the rats, and particularly recommends the use of anhydrous sulphurous gas, as also steam under pressure.

Doctor Valdes recommends that all warehouses be constructed as nearly rat-proof as possible; he also makes recommendation for a sanitary ordinance, containing eight articles, that should be put into force, the same requiring proprietors of establishments to destroy rats, besides providing for public assistance where that seems necessary. The sanitary regulations also prescribe the manner in which warehouses should be built, and it provides penalties for failure to comply with its regulations as well as for failure to report any cases of the bubonic plague.

#### CAN TREATMENT INFLUENCE THE DEATH RATE FROM LOBAR PNEUMONIA?

In 1889, Coolidge and Townsend published an analysis of 1000 consecutive cases of lobar pneumonia, comprising all those

treated at the Massachusetts General Hospital from the year 1822 to that date. This analysis has been supplemented by a recent study of all cases of lobar pneumonia treated at the same hospital during the period 1889 to 1917, the latter paper being contributed to *The Boston Medical and Surgical Journal* for February 21 by F. C. Shattuck and C. H. Lawrence.

The total series of cases the records of which were studied comprised over 4,000, and it was found that the mortality from lobar pneumonia has gradually increased, from 10 percent in the first decade, to 28 percent at the present time. This present death rate has been the prevailing one since 1881.

There has been a decided increase in complicated cases; which, however, probably is due to greater accuracy in diagnosis and recording.

While the relative number of foreign-born patients is increasing, the mortality among these is diminishing. On the other hand, the death rate among American-born patients has increased slightly, and so has, also, the mortality among men as compared with that among women.

The authors in question conclude from their study that treatment has done nothing toward diminishing the mortality from pneumonia in the past ninety-five years. Bleeding, purging, fresh air—the result has been the same. No change is to be expected, the authors opine, in the results of treatment, until a specific is discovered that will neutralize the toxins of the pneumococcus.

Incidentally, an interesting point is raised concerning the effect of alcohol. Its previous habitual use, during health, in more than moderate amounts, is shown to diminish the patient's chances of recovery. But, the mortality rate among those patients who were given large amounts of alcohol during their illness is no higher than among those given no alcohol, but, fresh air freely. The figures do not indicate that alcohol is harmful to those sick with pneumonia. They suggest that the effect of the drug varies with the conditions under which it is given, and that it is not poisonous to those who have high temperatures and are taking insufficient nourishment. So far the report.

It is rather a pitiful showing that the treatment of pneumonia, as conducted in one of the leading hospitals of the country,

by men among the foremost in the medical profession, has yielded no better result than an increase in mortality rate, from 10 percent, to 28 percent among the patients there treated. That being the case, it seems as though those men who claim far better clinical results from active and definite methods of treatment should be accorded a hearing.

In CLINICAL MEDICINE for February, 1917, Dr. Solomon Solis Cohen gave some bedside directions for the treatment of acute lobar pneumonia, his essential treatment being quinine and urea hydrochloride, while, incidentally, special indications are met as seems most suitable. Under this form of treatment, the clinical results give a much better showing. A goodly number of reports have been published, during these years, in these pages, mostly by general practitioners, who assert positively that the mortality among their lobar-pneumonia patients is low—certainly less than 10 percent. And this can be accomplished by means of active treatment. It may be suggested that the orthodox "expectant" treatment hardly is justified or even defensible, though it has the sanction of the Massachusetts General Hospital.

#### WHEN IS SYPHILIS CURED?

In an editorial in its April issue, *The Medical World* discusses the important question of when a disease is cured. All contagious diseases, especially, require careful attention, to determine the point when cure can be said to have occurred. This problem acquires particular prominence in a disease that is so manifold in its influence far beyond the affected individual as is syphilis. In accordance with its possible effects upon the posterity of the patient, the determination of a definite cure should be the aim of every physician handling cases of this kind, and its importance necessarily must be impressed upon the patient himself.

Years ago, after a period of three years of persistent treatment, followed by two years without treatment, during which no visible signs of recurrence were evidenced, syphilis was said to be cured. This frequently was the occasion for giving consent to the patient to get married. Unfortunately, though, in most instances, the patient probably was not cured, as became evident some years ago, after the introduction of the Wassermann test, when "cured"

syphilitics were subjected to it and gave a positive reaction in a large percentage of cases. However, even this test may be misleading when negative. After a period of intensive treatment or of salvarsan injections, the patient's blood may show a negative reaction, and, yet, still later, it may yield a positive reaction. Or, also, while the blood may show a negative reaction, a positive reaction may be obtained in the spinal fluid.

Under these circumstances, the editorial in question continues, there is only one known test that can be said to be infallible, and that is, a reinfection with syphilis—which, though, if "successful," is not a condition exactly satisfactory to the patient, despite its proving that he had been cured. Thus, then, this heroic test not being applicable in practice, it must be admitted, despite the improvement and refinement of treatment, that the point as to when syphilis is cured still is unsettled. Indeed, observations seem to suggest the disconcerting and disappointing conclusion that possibly no known treatment is capable of eradicating syphilitic infection.

From all of which it follows that clinically syphilitic patients should be urged to submit to intensive treatment until every symptom has definitely disappeared, and then should continue under medical observation for one to two years, meanwhile reporting for periodical Wassermann tests, and, if indicated, submit to periodical courses of treatment at intervals of from six months to one or two years. By this course, it will probably, be possible to prevent harmful proliferation of the syphilis-virus and ultimate involvement of the nervous system.

#### PHYSICAL FATIGUE AS A FACTOR IN INCREASING SUSCEPTIBILITY TO COMMUNICABLE DISEASE

*Public Health Reports* for March 22nd (p. 403) reminds us that fatigue in its relation to health has been the subject of many investigations. With the beginning of the present world war and the immediate need for soldiers, sailors, and munitions, this question became one of great importance. The effects of fatigue in the making of soldiers, sailors, and of munitions should be very carefully watched, with a view to maintaining the output of training camps and munition-factories at its highest level



during the war. No necessary sacrifice of men should be questioned at this time, but, when methods employed for speeding up this output are liable to "invite disaster," such methods should be carefully revised.

In the investigations into the prevalence of communicable diseases conducted by the division of sanitation of the Bureau of Medicine and Surgery of the Navy Department, the conclusion was reached that fatigue is a factor in their spread and that "the attempt to make a sailor too rapidly is, to invite disaster."

In "Notes on Preventive Medicine for Medical Officers, United States Navy," published as Bulletin No. 12, Division of Sanitation, by the Department of the Navy, the point was brought out that, while many persons in camp may harbor in the rhinopharynx the causative meningococcus of cerebrospinal fever, relatively few of the men exposed contract the disease, but, that many of them become meningococcus-carriers. All meningococci may not be and probably are not virulent. Individuals vary in susceptibility; and, indeed, susceptibility seems to vary from time to time in the same individual. Other infections, age, exposure, fatigue, mental depression, digestive disturbances, lack of food, and unsuitable clothing, individually or collectively, undoubtedly play an important role.

In the development of lobar pneumonia or of cerebrospinal fever, experience seems to show, one of the most important factors active is that of fatigue. This was evident particularly at Great Lakes, in connection with last winter's outbreak of communicable diseases, when, the incoming detention being broken, several thousand recruits were subjected too early and too precipitately to the excellent but intensive system of training in vogue at that station. About the same time, two severe blizzards occurred and it was necessary to employ several thousand apprentice seamen to clear the roads and walks of snow from 3 to 6 feet deep. There was thus involved an unusual amount of hard work combined with exposure, and this brought about, in many instances, a certain degree of fatigue and lowering of resistance to infection. Shortly thereafter, there occurred a widespread prevalence of bronchitis and coryza, followed by an outbreak of various communicable diseases of the respiratory type, including lobar pneumonia and cerebrospinal fever. Similar experiences were had

elsewhere; and, in truth, "the attempt to make a sailor too rapidly is, to invite disaster."

#### PHYSICAL FATIGUE AS A FACTOR IN INDUSTRIAL EFFICIENCY

In the preceding article reports are cited concerning investigations made at several naval training stations, substantiating the conclusion that fatigue should be avoided in training, as it has been found necessary to prevent it in munition-factories. Investigations in the latter establishments have shown that the output in a work-day of eight hours, of two 4-hour periods, was materially increased by permitting ten minutes for rest out of each 4-hour period. It was also shown that the night shift, which was required to work nine hours—divided into a 4-hour and a 5-hour period—gave results in the 4-hour period which did not differ materially from those given in the first day-period, but that during the 5-hour period very little output was secured in the last hour. By eliminating an hour from this period, the total output for the night shift actually was increased.

The results of these various investigations and inquiries can readily be applied to conditions in civil life, even if the theory promulgated a few years ago, according to which fatigue-toxins develop in the course of continued exertion and may be responsible for serious consequences, is not definitely established. That "haste makes waste" is true and all speeding up, is exceedingly liable to defeat its object if pushed beyond the limits of safety.

#### ACONITE IN TONSILLITIS

In the February number of *The Therapeutic Gazette*, A. J. Rodman writes concerning the treatment of diseases of the tonsils. "If the medical fraternity knew the influence aconite has on the tonsil, its diseases would be much less troublesome. I learned this power of aconite over the tonsils accidentally. When called to treat quinsy—a very common disease in Illinois, where I then resided—and finding the tonsils inflamed and largely swollen, I used aconite quite freely in the treatment, and soon found I had a very effective remedy for that painful disease, and that, unless pus had already formed when called to the case, I never had that disagreeable termination of the disease."

# Miscellaneous Articles

## Studies on Food Economics

### XII. Carbohydrates and Hydrocarbons

THE largest proportion of man's food is composed of the carbohydrates and hydrocarbons, the protein portion being required only to repair the waste of the albuminoid tissues of our bodies; both these carbonaceous elements of our food being mainly engaged, in our life-processes, in furnishing force and heat. In cold climates, where the demand for heat-producing food is the greatest, the hydrocarbons, or fats and oils, are most in evidence, these being the easiest converted into body-fuel. In southern countries, on the contrary, production of heat is subordinate to that of force, hence, there the carbohydrates of our food supplies are more prominent.

The world, at this period in the world-war, is confronted by an inadequate supply of the cereal foods and flesh material; however, the semitropical and tropical countries can make up in nutritive material this cereal shortage in such an abundance that the want-cry of food may be hushed.

It is a remarkable fact that the albuminoids are present in the *banana* in almost the same proportion as they are found in milk; the latter, according to three investigators, containing them to the extent of 4.3 percent. Dry wheat flour contains about 12 percent of albuminoids; hence, one pound of it would be equalled in nourishment by three pounds of fresh bananas. Were these dried and reduced to flour, one pound of this banana flour would, probably, equal two pounds of wheat flour in nonnourishment.

Inasmuch as the potato is one of the main foods of the Anglo-Saxon races of mankind and there being a shortage of this vegetable in the United States; and, further, the labor required to produce this crop, if diverted to the cereal, would largely increase the supply of the latter, hence, if we can obtain a partial substitute for

potatoes, we shall, thereby, greatly increase our food supply.

A comparison of the banana with the potato is of particular interest. Quoting from an analysis of Atwater and Bryant (p. 68 of Bul. No. 28), we have the following figures:

	Potato	Banana
Water .....	78.3	75.3
Protein .....	2.2	1.3
Fat .....	0.1	.6
Total carbohydrates in- cluding fiber .....	18.0	22.00
Ash .....	1.0	8.
Calories .....	28.5	46.0

As to the ash of banana, we have the following:

Silica .....	2.19
Lime .....	1.82
Iron oxide .....	0.18
Phosphoric acid .....	7.68
Magnesia .....	6.45
Soda .....	15.11
Potassa .....	43.55
Sulphur trioxide .....	3.26
Chlorine .....	7.23

Thus it is seen that the ash of the banana is largely made up of the basic salts—the carbonates, phosphates, chlorides, and sulphates of potassium, sodium, and magnesium, the elements so necessary to the health of the body in its vital processes.

Now, while potatoes, onions, and bananas all yield an alkaline ash, and thus are antagonistic to the development of acidosis, the two former vegetables have become, during the past year, almost prohibitive in price to the working people of this country, while the banana is about the only food which during the last two years has not shown a marked increase in price. It is, in fact, "the poor man's food," since its supply is unlimited; the only limit in this country being the import duty. However, being a necessary food, no duty should in-

terfere with its entry into the country.

The present need of the government for alcohol is great, and the banana is a much better source from which to obtain it by fermentation than are the cereals. By a free and extended importation of bananas, much grain might be diverted from distillation and added to our food supply.

Food conservation is proper, and all right in the main, but, it is poor policy to underfeed a people. Disease always follows in the wake of an insufficient food supply of a people. The banana may be used as a food supply during the whole year. Reckoned by calories, bananas at present prices will give us 65.9 for one cent, while one cent will purchase of potatoes containing only 46.6 calories.

Another thought. Sugar being a necessary food for the human family, and the present world's supply being inadequate, why not look to the banana for an additional amount? The banana certainly stands in the front rank of sugar-producing plants.

The fruit can be dried at the points of production and shipped in the form of flour. A sample of such flour had the following percentage, as compared with wheat flour:

	Moisture	Proteid	Carbohydrates	Minerals
Banana flour	13.0	4.0	80.0	2.5
Wheat flour	13.8	7.9	76.4	0.5

Another thought: the starch of the banana is much more digestible than are the cereal starches. Again, we find by comparison that the banana is, as a dried meal, about the equal of rice meal. In fact, we find it in tropical countries largely used in the place of grain as a food. One acre of bananas, it is said, will feed a family. Hence, this abundance of food tends to reduce the stimulus to labor.

Were our soldiers supplied with an abundance of bananas as food, not only would their energies be increased, but their health would be better sustained.

Again, in civil practice, were the medical profession to teach patients the food value and healthfulness of bananas, they would be doing their little bit toward the conservation of life by an added nutrition.

A. T. CUZNER.

Gilmore, Fla.

#### UNIFORMS? NO, INDEED!

I see in your January number that Dr. H. J. Smejkal comes forward with an

article advocating uniforming members of Selective-Service Boards. I wish to take exception to such a procedure. While it might do for the larger cities, where so many are strangers to members, I do not believe that the localities outside would sanction such a procedure for a moment. I know our Board would not. The members of the local boards, outside of large centers, are as well known by everyone as is the sheriff and the county judge. The shield sent to every board member, with its "Selective Service, U. S.," worn as a lapel-button, is all-sufficient, and I hope the suggestion may not be acted upon by the government.

E. V. ANDERSON.

Woodstock, Ill.

#### "EVERY DOCTOR IN THE MEDICAL RESERVE CORPS"

On page 110 of the February number, I notice an article headed "Every Doctor in the Medical Reserve Corps." I approve and advocate your sentiment; I have even taken a step in advance, for, in December last, I wrote a personal letter to our efficient secretary of war, Mr. Newton Baker, that every physician in the United States should be drafted for service. I also suggested a plan that could be put into immediate practice and service; which is as follows:

Draft every physician in the country for service, then eliminate all those physically (or mentally) unfit, age to be no bar, if fit. Classify as follows: Age, 21 to 40, for active service at the front; 40 to 50, at intermediate hospitals; 50 to 60, at base hospitals; all above 60 to be stationed at their own base (homes), for service. These last ones should constitute the examiners' boards (drafts, disabilities, etc.).

Of course, this is but a rough sketch of the plan, but, such a plan could be worked out and would be efficient.

GEO. STOSKOPF.

Lakewood, Ohio.

#### SHOCK: ITS ETIOLOGY AND TREATMENT

The condition known as shock or collapse may be defined as a sudden depression of vital powers that is caused by an injury or deep emotion. As a result, the nerve centers are acted upon and there

is exhaustion or inhibition of the nervous mechanism. The causes of shock are many, but, among the most common, other than psychic, may be mentioned internal hemorrhage, infectious diseases such as typhoid fever and diphtheria, lesions of the heart and lung, as pneumonia, abdominal diseases, as gastric ulcer and intestinal perforation. Shock may also occur after a severe trauma or surgical operation.

As to the theories for the causation of shock, there are many. The most plausible, however, is that of Crile. The latter believes that shock results from the exhaustion of the vasoconstrictor center. This exhaustion is brought about by an overwhelming inflow of afferent impulses. It is evident, therefore, that in our treatment no medication should be given that will increase these impulses, but, rather, should be made to block these paths.

A very common picture was, and even is now, to see a patient who has suddenly become pale, skin clammy, pulse barely perceptible, and respiration shallow, and perhaps losing consciousness, being given strychnine by mouth or hypodermically, or perhaps given whisky or caffeine. All these drugs tend to increase the afferent impulses and, hence, do more harm than good. The symptoms described are those of shock. The blood pressure is found to be lowered, the temperature may at times be subnormal, general muscular weakness is complained of, and the mind becomes dulled.

The treatment toward this condition is simple. No drugs such as camphor, caffeine or strychnine should be given, as these only tend to stimulate psychic centers; hence, increase the impulses and, therefore, aggravate the condition of the patient.

In moderate attacks, as where there is a feeling of faintness or in fainting, either let the patient sit with his head between his legs or let him lie down, with head lower than his feet. A whiff of aromatic spirit of ammonia very often is effective in reviving the patient.

In cases more severe, absolute rest, plenty of air, and the maintenance of body warmth by means of hot-water-bags or blankets is essential. Morphine acts here almost as a specific. Adrenalin (15 minims of the 1:1000 solution) intramuscularly or intravenously raises the blood pressure and often is effective. Where there is hemorrhage, a saline infusion, about 1000 mills (Cc.), to which adren-

alin has been added and slowly administered, greatly hastens recovery. Pituitrin, 1 mil, hypodermically or intravenously, also may be used.

The essential thing is, not to stimulate, but, to rest. One of the best means to block the impulses is morphine.

I. RUSSELL KUHN.

Fallsburg, N. Y.

[Quite recently, Dr. W. T. Porter, of the Rockefeller Institute, advanced a new hypothesis concerning traumatic shock, which has much to commend it. Doctor Porter had been sent to France for the purpose of studying the question whether the violence of bombardment predisposes the wounded to shock. If so, the lowering of blood pressure would occur very soon after the wound is received. He found that shock occurs most frequently after fracture of the femur and after wounds (multiple) of the fatty tissue. Laboratory studies seemed to prove that it is the presence of fats absorbed into the circulation that cause traumatic shock by producing fatty embolism in the smaller capillaries. If the circulation could be stimulated, these embolisms might be overcome and the blood made to flow back into the heart, where it was needed, from the veins in which it was dammed up by the globules of fat. Porter accomplished this by increasing the force and frequency of the respiration, thus stimulating the "respiratory pump."

Doctor Porter's communication is referred to editorially in *The New York Medical Journal* for January 23, where more details regarding it can be found. Ed.]

#### TO THE DOCTORS' WIVES WHO ARE LEFT BEHIND

As another doctor's wife whose husband is serving overseas, I thought I would like to try and cheer up your correspondent who writes in the March issue of *CLINICAL MEDICINE*.

We left England some years ago and settled here in Canada, but, when this awful war broke out, my husband could not be happy doing nothing to help; so, two years ago, he returned to England and joined the R. A. M. C., leaving me and our six children here. Since then, one son has joined the R. F. C., and I am living away

out in the country twenty-five miles from town; but, not unhappy, for, I feel that we are doing our share to help win the war, and am praying and trusting that we may be united before so very long. Your correspondent should be happy having her father; I have no relations at all in this country.

I, like her, also read *CLINICAL MEDICINE* each month and am keeping up my husband's subscription, and I should miss the magazine very much if I did not get it. I hope that she will look on the bright side of things and that her doctor may come home safely to her, as I trust mine will.

ANOTHER DOCTOR'S WIFE.

### THE CRUSADE

The people, the people have taken up the sword  
And ranged themselves beside the conquering legions of the Lord;  
They are marching, they are marching, with a swift and fateful tread,  
To the rescue of their living and the vengeance of their dead.

The nations, the nations are gathering for the tryst  
Of freemen with freemen at the newmade tomb of Christ;  
The earth is shaking, shaking, and the veil is rent in twain—  
But, wo to them, on trysting-day, by whom the Christ was slain!

The glory, the glory of a resurrection noon  
Is reddening in the darkened sun and in the bloody moon;  
The dawn is breaking, breaking, through the triple-banded night  
And earth will soon be flooded with resurrection light.

America, America has heard the trumpet blast,  
Her sons have hit the trail that leads through blood to peace at last;  
She has flung the Stars and Stripes about the body of her Lord,  
And she'll blaze His way to victory with the lightning of her sword.

T. G. ATKINSON.

Chicago, Ill.

### BOOKS AND INSTRUMENTS FOR SALE

We are informed by Mrs. Bertha Murphy, Box 24, Wawota, Saskatchewan, Canada, that she desires to dispose of the books and instruments of her late husband, Dr.

J. J. Murphy, who was a valued subscriber of *The American Journal of Clinical Medicine*. We hope that it may be possible to aid Mrs. Murphy in realizing something on these things—which her husband bought at considerable expense—because, of course, the money would be of service to her.

### WHAT THE WAR HAS DONE FOR MEDICINE

The great war has presented to the world a new form of community life, with a new combination of the various elements that are to be found in every concentration of the population of western countries.

This war is unlike any previous war, in that the old idea of campaigns, with armies fighting battles and moving over large districts of territory, was true in Belgium and France only for the first few weeks of the conflict. Such a conception has been realized more in the distant battlefields of Asia and eastern Europe. The majority of the troops engaged on the west front have settled down to a permanent location and have continued more or less fixed in position for more than three years, while they carry on their daily and nightly tasks of combat in what is known as trench warfare.

This war of 1914-1918 has developed, therefore, a community which has a population exclusively male, densely concentrated into habitations of the rudest structure, without modern facilities for sanitation, for ordinary cleanliness or for the housekeeping-needs of the poorest dwellers in modern cities. The inhabitants of these "towns" are absolutely nonsupporting and chiefly employed in killing with rifles, bombs and machine-guns their nearest neighbors or in protecting themselves from the like desire of their neighbors to "do" them first.

This population is a shifting one so far as the individuals are concerned, and it must be supplied with every necessity of life, and with the munition supplies, as well, to carry on its chief occupation. These trench towns consume, in proportion to their population, a vast amount of supplies and the inhabitants live a life entirely different from that of any community previously known in times of peace.

Such a community has developed new medical problems and has exaggerated some older ones already well known to the army



medical departments of all nations. The modern weapons, with their high explosives and rapid fire and the inhumanities of asphyxiating gases and liquid fire have produced surgical conditions which are extremely infrequent as complications of the accidents of civil life. The habit of continuous warfare also has compelled the relief-squads to delay their merciful tasks, and there results a high percentage of neglected infection and of the severer forms of blood-poisoning and gangrene, which modern aseptic surgery had eliminated from the experience of hospital practice.

At the beginning of the war, an appreciable number of troops had not been protected by the modern methods of vaccination against typhoid fever. That disease and more particularly the closely allied condition of paratyphoid fever were very prevalent. At the present time, both diseases have been controlled to a large extent by a full application of the methods that were developed and first applied in the army of the United States. At the present time, owing to the perverse influence of the so-called "antivivisectionists" in England, this form of preventive inoculation is only voluntary in the English army. Nevertheless, nearly all the Tommies request it, because its good effects have been demonstrated conclusively even to the enlisted men. The latest development of the war is, an earnest endeavor to apply the same preventive measure to control the various forms of pneumonia, which has become a real menace to the troops wherever they are concentrated in large numbers.

The war has necessitated the formulation of methods to control diseases communicated by water. This has been done, and dysentery, one of the oldest foes of armies, has been made less prevalent than in former wars. The present-day army-physician must do more on these lines, however. He must discover, by quick action, any contamination of wells and other supplies of drinking-water from the introduction of dead animals, sewage, and even mineral poisons, such as arsenic, whenever the allies advance into the territory lately occupied by the modern Huns.

The war has emphasized the importance of the group of diseases which are transmitted by the bite of vermin. One of these, known as "spotted typhus," is caused by the

body-louse and is normally found in south-eastern Europe. This noxious parasite has come under control by a rigid application of sanitary rules and by inoculation. Another disease of this group is known as trench fever, and was discovered and introduced into western Europe by the war, probably from the Orient. It is a short, very debilitating fever of low mortality, but, one that incapacitates its victims for an appreciable period.

The medical staffs have controlled the ravages and negated the military advantages which the German military staff expected to gain from the illegitimate use of large quantities of irritating gases. This was done by the application of properly constructed masks, although a number of casualties and substantial gains were made at the first attempt to advance in this manner.

The greatest additions to the antiseptic treatment of wounds have come from the chemical studies of Doctor Dakin, who has applied in various ways the properties of chlorine preparations to the disinfection of the wounds of this war. The problem which Doctor Dakin solved was, to discover strong antiseptics capable of destroying microbes without damaging normal tissues. Dr. Alexis Carrel developed a method of using the antiseptics of Doctor Dakin in the severely infected wounds that came to his hospital on the French front. His method consists in putting into the wounded tissues a system of multiple tubes and keeping the wound constantly washed with the antiseptic solution. The progress of the wounds is watched by a daily bacteriological examination, and as soon as it is germ-free it is closed, when healing is quite prompt if the observations have been done in a precise manner.

The war has developed two large groups of cripples, one including those who have been maimed by the loss of hands, of arms, of legs, of eyesight, and in other physical ways. A great endeavor has begun to re-educate these men and to fit them for new trades and for a useful and self-supporting life. Many of this group of men can be taught to do work equally effective to that of their antebellum activities, although in a totally different line of endeavor. The second group of cripples are those who suffer from functional disturbances of the central

nervous system. These cases present paralyzes and other disturbances of locomotion that are purely hysterical or they manifest mental disorders that also are functional, but, which simulate true insanity in any of its manifold varieties. One of the most characteristic cases is that known as "shell-shock," which is attributed directly to the sudden and unexpected exposure to the vibration and noise of the discharge of high explosives in a person overtired by physical work and overwrought by mental fatigue. A great success has been achieved by systems of nerve and muscle education, especially in French institutions devoted to this work. Many of the sufferers from these functional disturbances of the nervous system have been returned to a useful civil life, some even having rejoined the fighting ranks.

The effect of the war upon medical education has been very striking.

The war has taken away all the surplusage from medical teaching staffs—particularly the surgical branches—and has rendered a complete medical education increasingly difficult. The College of Physicians and Surgeons of Columbia University has lost, probably, more than a fourth of its force of instructors; in surgery, about a third. The effect upon civil hospitals has been equally startling. The attending staffs have been depleted in equal ratio with the staffs of the medical colleges. Hospital internes have accepted service after the one year of training required by law for the army and navy. Because of their enthusiasm, they have not waited to finish the two years usually required by most hospitals in this part of the country. There has been a tremendous upsetting of routine and personnel. Probably more than one-half of the internes have been lost to their hospitals. Many hospitals have reduced the term of service to one year.

To meet this deficit of men, the largest medical schools of New York City have put new speed into their instruction, by omitting the usual vacation between the third and fourth years, and will graduate students in February, instead of June. Columbia, New York University, and Fordham have made this change.

At the same time, by intensive training and by clinging tenaciously to high standards, the medical schools are resolved, as

well as confident, that the war shall not make the coming generation of physicians less well trained. When the score is added, it will be found that the war has done much to advance medicine along particular lines and that medicine has done much to advance the war.

SAMUEL W. LAMBERT.

New York, N. Y.

### THE EAGLES ARE COMING!

Methinks I see in my mind a noble puissant nation,  
rousing herself like a strong man after sleep and  
shaking her invincible locks; methinks I see her as an  
eagle viewing her mighty youth and kindling her en-  
dazzled eyes at the full midday beam.—MILTON.

The eagles are coming. Fast hasten the  
day

When we shall behold them in battle-array,  
Aerial squadrons that haste to the fray.

The eagles are coming!

Afar o'er the battle-swept plains of the east,  
Their talons shall rend the foul heart of  
the beast.

Swift, swift be their vengeance and dread  
be their feast—

The eagles are coming!

O fools thrice besotted who plot and who  
scheme

To stay the sure course of the oncoming  
stream.

How futile your efforts, how baseless your  
dream!

The eagles are coming!

O brothers who fight with the beast in  
his lair,

Who breathe the fell fumes of his breath-  
poisoned air,

Hold fast your high courage, yield not to  
despair!

The eagles are coming!

Proud emblem of Liberty, gift most divine,  
Fierce bird of the mountain, the forest, the  
pine,

Our souls are aflame with that spirit of  
thine.

The eagles are coming!

As day's rising beams chase the shadows  
of night,

So swift be their pinions, resistless their  
might.

Hail, heralds of Victory, Freedom, and  
Light!

The eagles are coming!

FRANK L. ROSE.

Jackson, Mich.

### SUCCESSFUL TREATMENT OF MALARIAL INFECTION

When I started in practice, I got in the  
habit of putting many of my spare mo-

ments (had plenty of them!) into studying up some of the rarer diseases that we had to deal with. I would read up all I could find on one subject, then I would take some time in thinking it over, then I would formulate a plan of treatment and write it out in a pocket-notebook. In after-years, that old notebook helped me out of a good many difficult situations; and some of the best work I have ever done has come from those notes.

Living only nine miles from the Mississippi River, I expected to get a lot of malaria to treat and had a plan ready to hand for attack, but, it was many years before I ever saw a case. At last, the cases came, but, not the kind I had been looking for. I got in succession a number of patients with rather indefinite complaints, some of whom had been ailing for five or six years. They all complained of digestive troubles, some were slightly jaundiced, most of them had rheumatic pains and headaches, and every one of them complained of severe lumbar pains. I was unable to make out any cause for their troubles, so, I called in consultation, for one of the severest cases, an old doctor of Clinton who was quite popular in my community. And that old man gave me the best lesson on practical medicine that I ever got.

After examining the patient, he proceeded at once to tell me what to do. "But, doctor," I asked, "what ails the patient?" With a slight shrug of his shoulders, he just drawled, "Oh, I don't know." "But," I insisted, "how am I going to treat the man if I don't know what his ailment is?" With irritation in his voice, the old gentleman replied, "Well, young man, if you must know, you had better find out for yourself." The doctor was cross; but, as for myself, I was mad through and through, and as soon as he was gone I proceeded to follow his advice and find out for myself. I took my patient to Chicago and had Professor Knapp make a blood examination, and this revealed the cause of the whole mysterious trouble—the plasmodium malarie in plenty. Thus, all my cases were those of chronic malarial poisoning, and the way seemed clear for successful treatment.

As intimated before, I had nothing in my notebook on this subject and had to go to the textbooks for help; but, while I did secure some improvement, I failed to cure,

and, so, had to fall back on my old way of a period of study, then thinking out a plan of my own. And, after several trials, I finally evolved this prescription, which did the business most effectually:

Methylene-blue, medicinal (C. P. Merck).....	1 part
Sodium sulphocarbolate, C. P. (Merck).....	1 part
Salol .....	1 part
Acetanilid .....	1 part

Fill with this powder No. 1 capsules  
Directions: Take 1 such capsule after each meal. For some of the worst cases, I filled No. 0 size capsules. Of course, before prescribing these capsules, I would give the patient a good cleanout, using for this purpose three or four doses of a tablet containing calomel, 1-2 gr.; santonin, 1-2 gr.; podophyllin, 1-12 gr.; following this up with a few doses of a laxative saline.

Ten days of this treatment would free the blood entirely from the malarial parasite and all the clinical symptoms would disappear, when the patient would be dismissed with a good iron-and-arsenic tonic. During a period of three years, I treated 30 cases of this kind, all successfully.

Then intermittent fever of a rather severe type broke out in one of the nearby river-towns and one morning they brought a young woman to my office. She was just starting in with a chill. I had seen several cases of ague chills while I attended college, but, this one looked to me more like a continuous convulsion. It was simply impossible to count her pulse. I gave her at once a hypodermic injection of morphine, atropine, strychnine, and nitroglycerin, and as soon as this took effect the chill subsided, whereupon I took her temperature and found it to register 106, with pulse at 140. She was a well-built woman and before this sickness had been robust and had had a fine complexion; but, now she looked anything but robust and her complexion looked somewhat like a cross between saffron-tea and road-dust. She said she had had a chill like this every other day for a month and that the doctors at home could not stop them, although she said she had taken quinine till she thought it would ring her head off.

I gave her positive assurance that she need not have any more chills. She got a room at a nearby hotel, to stay a while for treatment; and now I was happy, for, I got my long-awaited-for chance at a se-

vere case of acute malarial fever. And this is what she got:

First, one of those calomel, santolin, and podophyllin tablets at 10, 11, 12, and 1 o'clock. Next, one tablespoonful of a saline laxative at 5 and at 6 o'clock. Next, an enema of glycerin and epsom salt in hot water at 8 p. m. By 9 p. m., her bowels had moved several times, and freely. At 10 p. m., she received 30 grains of quinine in capsules, 30 grains of potassium bromide in solution, 1 tablespoonful of paregoric, and 1 teacupful of hot red-pepper tea. In the morning, her attendant reported that she had slept soundly all night and woke up feeling pretty good. Before breakfast, she got another tablespoonful of the saline laxative. In addition, I gave her this mixture:

Hydrochloric acid, dilute .....	dr. 4
Tincture of nux vomica .....	dr. 4
Tincture of capsicum .....	dr. 4
Essence of pepsin, enough to make .....	oz. 4

Label: 1 teaspoonful in one-half glass of water after each meal.

The second night, she received 20 grains of quinine, 20 grains of potassium bromide, 1 tablespoonful of paregoric, a cup of pepper-tea.

The third night, she got 10 grains of quinine, 10 grains of potassium bromide, 1-2 tablespoonful of paregoric, and a cup of the hot tea.

The fourth day, I sent her home. I never have seen such a change in a patient in so short a time. She was looking and feeling just as well as she ever had in her life, and has remained well ever since.

I got only three more cases of the same type, neither quite so severe, and they all did just as well; not one ever made any complaint of any disagreeable symptoms from the treatment. However, these few cases are not enough to establish the value of the method, so, I still am looking for more cases, in the meantime making this report for others to try it out.

W. A. MARNER.

Miles, Ia.

# STRYCHNINE VERSUS CAPSICUM IN DELIRIUM TREMENS

On page 156 of the February number of CLINICAL MEDICINE, there is an article by C. S. Cope, on the use of capsicum in delirium tremens, and it calls to mind my ex-

perience in a case of "jim-jams" treated some thirty-odd years ago.

The patient, a lawyer of middle age, after celebrating a political victory rather too profusely, had an attack of the "jimmies," and his brother, on the advice of an old "yarb doctor," administered a teacupful of red-pepper tea. However, instead of relieving, this hot potion caused the greatest agonies imaginable, succeeded by the wildest delirium. The man continued in this condition, without sleep, for thirty-six hours before I saw him, although two other doctors had doped him to the limit with narcotics and used hot baths and everything else they could think of. When I arrived, it took two strong men to hold him on the bed. I proposed administering a hypodermic injection of nitrate of strychnine of  $\frac{1}{8}$  of a grain. This, the other doctors said, would kill the man, most certainly; but, I persisted, and, as the family was anxious for me to take the case, they retired and I assumed the entire responsibility.

I administered the dose, and in ten minutes the patient was quiet and in fifteen minutes was sound asleep and continued to sleep for thirty hours without waking. When at last he awoke, he was perfectly rational, drank nearly a quart of water, arose, put on his clothes, went to the pantry, and proceeded to eat ravenously of some hog-jowl and turnip greens and corn pone. All the past, to the drinking of the pepper-tea, was a perfect blank to him. He ate his breakfast at the regular hour and went to his office to work, apparently normal.

I have used strychnine in large doses in several cases of delirium tremens and it always induced sleep—which is the absolutely necessary condition to be brought about in these cases of acute cerebral anemia.

J. T. MCCOLGAN.

Celina, Tenn.

## HIGH-FREQUENCY CURRENT IN INTERCOSTAL NEURALGIA

Dr. L. B. Bates complains about the decrease in reports from the firing line. Complying with the editor's request, I will try to do my share. Here is my case.

A woman, aged 25, had severe intercostal neuralgia for two weeks. I tried all known pain-relievers, from the coun-

ter-irritation with a Rigoll's to the most complex balms, ointments, and what not. At last I decided to try the high-frequency current over the Valleix points. After three treatments of about ten minutes each, the pain disappeared and has not returned.

Now, can anyone suggest a practical, simple treatment for x-ray burns in the face?

GEORGE E. TALBOT.

Montreal, Can.

### GOAT'S MILK FOR BABIES AND INVALIDS

In reading *THE AMERICAN JOURNAL OF CLINICAL MEDICINE*, I see that the editor advocates the use of goats' milk for invalids and for babies that are not well nourished.

For a long time, I have been taken with the idea of prescribing goat's milk, princi-

malnutrition by having them take the milk fresh from the cow, that is, before it has lost its natural heat and when it has not had time to become filled with a host of bacteria foreign to the digestive processes in the intestinal canal of the child.



3 National Committee for the Prevention of Blindness, Inc., 120 East 22d Street, New York, N. Y.

Preservation of Vision.

pally because of the apparent immunity of these animals to diseases. Perhaps I owe my initial favor toward this employment of the milk of goats to the fact that for years past I have treated a great number of infants suffering from malassimilation and



2 National Committee for the Prevention of Blindness, Inc., 120 East 22d Street, New York, N. Y.

Preservation of Vision.

In this connection will you kindly indicate where I may obtain further information about this subject?

B. F. SHIRES.

Bedford, Pa.

[The Bureau of Animal Industry, Department of Agriculture, Washington, D. C., has published several pamphlets on the subject of raising goats and their use as milkers. These publications can be secured at cost from the Superintendent of Documents, Washington, D. C. Italy has developed several valuable breeds of milch goats: the Maltese are also good.—Ed.]

### THE RECOGNITION OF PAIN; ALSO, ABOUT THE PULSE

I once asked an ex-surgeon of the Army this question: "Suppose a man comes before you and says he is in pain, how can



you tell whether he is in pain or not?" His reply was: "You can't tell; you have to take his word for it."

I have made an important discovery in medical science, by determining the fact that when there is pain in any part of the body a certain tension of the pulse and contraction of the pupils of the eyes are observable. If there is noticeable no tension of the pulse and no contraction of the pupils, there is no pain.

I have also discovered that, in sick persons, there is a great difference between the pulse of the right wrist and of the left. The pulse of one wrist will tell us of the vitality, the constitution of the sick person; the pulse of the other wrist will tell us of the local disease (whatever that may happen to be), the real, the true condition of the patient. When the time comes, under proper treatment, that the pulse-beats in both wrists are alike, full, strong, and regular, we may know from this that the sick person is near being well.

In reading a person's pulse, we must always remember that Dame Nature is sending a message over the arterial "wire" and that it is our business to interpret the message correctly; if not, then so much the worse for us and for our patient.

I asked the same ex-surgeon of the army another question: "When a man comes before you and claims to be sick, how can you tell whether he is sick or well?" His reply was, "You can't tell without making a physical examination." I have learned this fact: when a person has a healthy complexion, a clear bright expression of the eyes; the tongue is light-red, moist, and clean; the pulse, full, strong, and regular; the muscles of the arm, firm, not flabby; then the person is in normal health.

These facts should be known to every doctor and every surgeon in the army and navy. It will detect malingering every time and help the physician to find out the real and true condition of the person. A patient may try to deceive you; however, the pulse will tell you the truth. These are facts that have been verified by me in nearly fifty years of practice. There is more in this discovery than you may realize.

ELI G. JONES.

Buffalo, N. Y.

[Comparatively little has been written that could guide us in the recognition or

diagnosis of pain, although several books have been devoted entirely to the subject of pain. Stanton's pretentious "Encyclopedia of Face and Form Reading" does not mention the word pain at all in its index. Butler, in "Diagnostics of Internal Medicine," dilates upon its importance for diagnosis, also upon its varieties and various characteristics, without, however, affording any guidance as to how its presence may be recognized. Musser, in his "Medical Diagnosis," devotes a little less than three pages to discussing the recognition of pain, referring to the mode of expression, the facial expression, the attitude of the reflex action, and the objective signs of disease. According to Fyfe ("Specific Diagnosis and Medication"), "pain or suffering is expressed in every portion of the body, and one may learn to recognize it as soon as the eyes strike the body; and, yet, it would be difficult to describe the expression," and he continues: "When pain is associated with, or the result of, undue excitation, the expression will be that of the excitation. But, if associated with or the result of an enfeebled condition, either of the entire body, the part suffering or the brain, the general expression may be quite the reverse, and will more resemble the exhaustion that follows excessive grief—one of anguish." And, further: "Pain and suffering are distinctly expressed in the features, yet not always in the same way. Firm contraction of the muscles is the most common expression. Thus, every reader will recollect the contracted brow as evidencing pain, especially pain with irritation of the nerve-centers. We involuntarily associate contraction of the structures about the eyes and the wrinkled skin with pain or with suffering. But, we have the evidence of pain in this region without muscular contraction; indeed, there is the reverse, drooping of the tissues, the expression is sad, of the exhaustion that follows excessive grief, and we are assured that there is enfeebled circulation in the brain, and the pain is the expression of atony." Cabot is the only author who refers to the pulse, having observed that "severe pain almost always carries a notable rise in blood pressure, and, if we find nothing of the kind, we may rightly conclude that, if pain is present, it is probably not intense." ("Differential Diagnosis.")

These are the only references that we have been able to find concerning the diag-

nosis of pain, and in none of them is any mention made of the state of the pupils.

It would be of interest to investigate and verify Doctor Jones's finding, that pain causes increased tension of the pulse and contraction of the pupils of the eyes; further, that the absence of increased pulse tension and of contracted pupil indicates the absence of pains because of the value of such a sign in the detection of malingering.

When Doctor Jones arrives at the conclusion that "the pulse of one wrist indicates the condition of vitality and of the constitution of the patient, while the pulse of the other wrist will tell us of the local disease, the real, the true condition of the patient," we can not follow him, since such a view, to us, seems more in keeping with the speculative philosophizing of medieval physicians, the Galenists, than in accord with actual discoveries of the bodily functions—their manifestations—of body and mind.

We are reminded of a passage to be found in the "Study of Medicine" by Dr John Mason Good (6th American edition, 1835), according to which this kind of differentiation in the doctrine of pulsation will "perplex pathology with a labyrinth in which the student is lost and the master wanders to no purpose." He quotes Frank ("De Curand. Hom. Morbis Epit.," tom. i. p. 30) as follows: "*Infida, arbitraria et aequivoca est multorum de pulsibus criticis doctrina.*" (Deceptive, arbitrary, and equivocal is the doctrine of many concerning the evaluation of the pulse). Doctor Good has a great deal more to say about arbitrary and artificial differentiation in the study of the pulse, but, nothing that would be of any particular value to us. The modern researches in this subject may be said to contradict directly any idea of the ancient view that the separate halves of the body, as represented, for instance, by right pulse and left pulse, regulate or govern different functions; and we can not bring ourselves to consider Doctor Jones' opinion seriously.

The question of malingering is an important one and one upon which much has been written. There is no doubt at all, of course, that "a healthy complexion, a clear and bright expression of the eyes, a light-red, moist and clean tongue, a full, strong and regular pulse, and firm muscles of the arm" indicate a state of health, while varia-

tion from these conditions means a pathologic state.—Ed.]

### THE SPREAD OF GOITER

Doctor McCarrison's report on his research-investigations on goiter has not received, on this side of the Atlantic, the consideration it merits; for, he demonstrated that goiter can be communicated to goats by giving them water to drink that had been polluted by the excreta of goitrous persons.

This experiment demonstrates, first, that goitrous water can be prepared. Second, that the disease is communicable, and also third, that it is intercommunicable between mankind and animals. And, surely, a disease that can be transmitted back and forth without modification has infinite possibilities of being spread.

In the old open-range country, where goiter appears to be endemic, I find that the trouble affects cattle, horses, sheep, dogs, pigs, and goats, practically all the domestic animals, in addition to people. In grown cattle, the thyroid enlargement is but rarely, if ever, seen, but, in the calves, it is fairly common at birth, having been transmitted by the blood in gestation. The cow mother shows no sign of gland enlargement and the enlargement in the calf usually disappears some time after birth, and that without any treatment. Hence, we see that cattle are germ-carriers and transmit the germ through their blood; also, that the enlargement in calves is reabsorbed into its system, through the blood.

In horses, the thyroid enlargement rarely becomes apparent until they are aged. In the smaller domestic animals, the enlargement may be met with at any time, about the same as in people.

Attention has been called to the fact that goiter-bearing streams change, those bearing the infection becoming goiter-free, and conversely. This is caused by the presence or absence of goitrous animals in the watershed of the streams.

Messerli, of Switzerland, reported that he found an increase of goiter coincident with freshets in certain streams, and advanced the view that endemic goiter is related to the use of water to which the microbes have gained access. The germs from the excreta of goiter-bearing animals



Is any explanation called for?

can be carried into the streams by rains, thus corroborating his opinion.

The statement, that goiter disappears on changing the source of water supply, is not in conformity with the experience that persons from a nongoitrous country can visit a goitrous area and later return to a nongoitrous country, and subsequently develop goiter. Also, goiter, by hereditary transmission, has been found in persons of the third and even the fourth generation after removal from goiter-districts.

The germ giving rise to goiter may be one native to North America or it may have been imported and become acclimated and thence is spreading from the stock ranges.

The present prevalence of goiter in Pennsylvania can be accounted for by assuming that the germs of the disease have been brought in by natives of the goiter-areas of central Europe, who acted as carriers and distributors in the coal-mining areas of the

state, from whence, through their excrements, the germs made their way to the streams, when they were imbibed by animals and propagated and again spread wherever the animals excreted.

I, therefore, advance the theory that every person and every animal that has drank water containing goiter-germs becomes a potential goiter-germ carrier and distributor of the disease, irrespective of whether or not he has reached the stage of thyroid enlargement. So, now, with our perfected systems of transportation, there are few areas in the country that are not within reach of being contaminated by one or other of them.

North America is steadily but insidiously being encircled by this disease. It is now established in the West, in the Rocky Mountain region, in the North in Canada, and now in the East, in Pennsylvania, with numerous sporadic outbreaks in various



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parts of the country, to such an extent that there are few communities that do not harbor at least one or two cases. And, as each case forms a center from which the infection spreads, the disease bids fair to overrun the continent.

Sporadic goiter is the result of germs imbibed that have been transported by water or by other germ-carriers. If for any reason the germs multiply rapidly, the disease may progress from a sporadic to an endemic character.



Hereditary goiter is goiter transmitted through the mother's blood to the fetus in the womb.

T. G. RITCHIE.

Cochrane, Alberta, Canada.

[The writer of this communication, who is an L. R. C. S. of Edinburg (1872), has devoted much study to this question of the germ-etiology of goiter, which, seemingly, has received much support by more recent investigations. However that may be, it is undoubted that thyroid enlargement is far more frequent on this continent at present than it was thirty or even twenty years ago. This may be only apparent, owing to the fact that the present fashion decrees that women wear dresses with open necks. Still, the impression is strong that physicians are being consulted more frequently nowadays for this affliction than they were formerly; and it is desirable to establish the exact etiology, in order to elaborate a reasonable causal treatment and prophylaxis.—Ed.]

#### GERMANY'S GREAT SECRET

An editorial under the above caption in the February issue of *CLINICAL MEDICINE*, "lays the fence down" for a little wholesome talk that is too inviting to resist. It says: "This war is a religious crusade;" then, on page 109 "stripped of its wordy camouflage," it tells (?) "the secret" in some 185 words. This editorial wants to say that Germany is on the anti and the allies are on the pro side of this religious battle. All (but the Kaiser) admit that Germany started the fight; that he had the tools and wanted to use them; that the most favorable conditions existed at the time for his success. All admit that the motive was for the existence of autocracy against democracy, the ruler against the ruled, the king against the subject. All admit that the allies are fighting for "liberty." Liberty against what? Answer: Liberation from the prospect of being ruled and exploited. All admit that, had there been no rulers, the people would not have waged war. Why? Answer: Because the processes of human life and of evolution lead toward peace, democracy, enlightenment, and self-government. All admit that, since the discovery and use of power (beginning with steam) the world has been welded together into one community and distance has practically been

annihilated. All admit that so rapidly has the world progressed in commercial and social lines, which lead to self-government and democracy, that the "one-man ruler" might soon be looking for a job.

But, where is the religious crusade the editorialist wants to bring to light? All admit that every war in the world, down to the confederate rebellion, was either a purely religious war or had underlying religious fanaticism playing a "full hand." Why not try to deal with fact, and not muddy the puddle, and worse by stirring in a lot of opinions based solely upon hypothesis?

In fact, religion, as such, is playing no hand in this fight; rather, it will justly suffer its share of loss of prestige and power along with the rest of the kings. "King" Religion, during a certain period of the biological process of human nature, was a necessary evil, as also was King Ruler. Man had to be forced to be moral, by some power greater than his will, so that he could know the good of morality. The Christian religion has been the most favorable to the advancement of mankind, because it is a democratic religion. It gives the subject a right to his own choice (believe and be baptized or go to hell—which is entirely optional). Most other religions compel acceptance, and nonconformists are led to the chopblock by the neck. This is pure despotism.

You will say, "I do as I please about religion." I tell you flatly that you do not, if you succeed in business. I dare any doctor who will say that to locate in a new town and publicly assert that he is an atheist or infidel. He will not succeed. It makes no difference whether you are an Alexis Carrel or a present-day Hippocrates. There are enough religious fanatics in every community who would die before they would employ you, in order to defeat you.

Happily, this war will improve that condition. You take a bunch of us army doctors, and you will find us getting together and talking freely, with the assurance that we shall not have our discharge handed to us the next minute, even though the truth be coming out of our souls just as we see it. And you will not be slow to form a conclusion. If liberty is not to be complete, including religious liberty, the price we are paying is too dear.

A physician, to be successful, has to affiliate with some one of the branches of



the Christian religion, the Masons, Odd Fellows, Elks, and belong to all the town clubs and such, solely for the purpose of getting a "standin" for business, or else stultify his conscience by playing shut-mouth. The same holds good for almost all other lines of business.

Can you see a chance for improvement directly crossing to this armed conflict of the worldwide nature? Let us see! What is the Y. M. C. A. doing? It is not the standard-bearer of a religion, certainly, albeit, still bearing the adjective "Christian." It is growing like a bay-tree. Every soldier in this army "swears by it." This same is true of the Knights of Columbus. If this war lasts three years, the Y. M. C. A. will be the largest moral organization in the world, and it will keep on growing.

And what are the army surgeons doing? They are getting in touch with each other in the manner that could not have been possible any other way. These men never will be satisfied to reenter private practice again, but, will start up team-work with a regular organization, very much like the dreamer's "Medical Utopia" that was depicted in *CLINICAL MEDICINE* some time ago, and which the editor relegated to the advertising pages—not willing (I presume) to fill his journal's space with such a myth.

While we are paying for it, let us see to it that we receive "the goods."

T. H. STANDLEE,

San Antonio, Tex.      1st Lt., M. R. C.

[There do not seem to be any real differences between Doctor Standlee and myself; merely a question of terms and a misunderstanding about intentions. The fact is, the doctor's letter is a powerful brief in support of my contention that the issue at the root of the war is a religious issue: for all the things which he declares to be at stake in this struggle—democracy, liberty, self-government, yes, and even the overthrow of the false autocratic "King Religion" which he believes will be one of the outcomes of this war—all these things are religious issues. Religious, not in the sense of being Protestant or Catholic, or, so far as that is concerned, even Christian, but, in the sense of representing the spiritual idealistic forces which make for just the conditions to which Doctor Standlee looks forward.

The only misunderstanding between you and me, dear doctor, is concerning what I

mean by religion. I do not mean what is popularly or technically called by that name. I mean, on the contrary, all those things which you idealize. Just as I said at the close of my editorial—righteousness, and fairness, and virtue, and honor, and the brotherhood of man, and the rights of the weak, and truthfulness, and justice—these are what I mean by religion. Democracy itself is a religious issue. You say, the struggle is between democracy and autocracy. But, that does not touch essential principles. Democracy and autocracy are mere modes, mere local applications of certain principles to particular cases, to wit, to national and civic government. Back of autocracy and democracy lie the principles, respectively, of dog-eat-dog and of the brotherhood of man. And these are religious principles.

This truth has been rapidly dawning upon the democracies of the world since they began their death-struggle with autocracy. Taking up arms in defense of their national existence, they have come to realize that their life consisteth, not in the things that they possess, but, in the soul of democracy itself, which is the brotherhood of man. Whatever may have been the former conceptions of democracy, this is unquestionably the democracy of the future, to which all the nations of the earth are steadily converging. And this is what I mean by religion. If, as you say, doctor (and I thoroughly agree with you), technical religion stands in the way of the realization of this ideal, then technical religion will have to go by the board and make way for the true religion of democracy, and liberty, and genuine brotherhood; and, as you yourself point out, one of the chief issues of this war is, to bring about this state of affairs. Well, that's a religious issue, isn't it? So, we agree, and will go out to dinner together, after all.—Ed.]

#### THE CHICAGO SESSION OF THE AMERICAN MEDICAL ASSOCIATION, JUNE 10 TO 14

*Committee on Arrangements.*—The Local Committee on Arrangements for the annual session of 1918, to be held in Chicago, June 10 to 14 is actively engaged in perfecting plans for the comfort and entertainment of the Fellows of the Association

and their guests who will attend this meeting of the American Medical Association.

All correspondence with the Local Committee on Arrangements or with any of its subcommittees should be addressed to 25 East Washington street, Chicago.

*Clinics.*—The chairman of the subcommittee on clinics, Dr. Charles F. Humiston, announces that there will be a series of clinics for the Fellows of the Association on Thursday, Friday, and Saturday, June 6, 7, and 8, and on Monday and Tuesday, June 10 and 11. Further announcements regarding the clinics will appear in these columns as occasion warrants.

*Alumni and Section Dinners.*—Alumni and section dinners will be held Wednesday evening from 6 to 8 o'clock so as not to conflict with other events that are being planned. The chairman of the subcommittee on alumni and section entertainment, Dr. J. H. Stowell, announces that his committee is cooperating with officers of alumni associations in arranging for reunions. The committee desires, also, to assist the officers of those sections which desire to arrange for section dinners.

The meetings of the sections will be held in various hotels, particulars being obtainable on registration.

The general headquarters of the session will be at the Hotel Sherman, corner North Clark and Randolph streets, where Fellows of the American Medical Association will register and receive their programs. In the same place, will be located the scientific and commercial exhibits, as well as the information bureau.

### THE MEDICAL RESERVE CORPS

The Surgeon General of the United States Army has asked us to publish the following appeal:

"I wish to call to the attention of the profession at large the urgent need of additional medical officers. As the war progresses the need for more officers each day becomes more and more apparent. Although the medical profession of the country has responded as has no other profession, future response must be greater and greater. The Department has almost reached the limit of medical officers available for assignment.

"Therefore, I bring to the attention of the profession at large the necessity for

additional volunteers. So far the United States has been involved only in the preparatory phase of this war. We are now about to enter upon the active, or the fighting phase, a phase which will make enormous demands upon the resources of the country. The conservation of these resources, especially that of man-power depends entirely upon an adequate medical service. The morning papers publish a statement that by the end of the year a million and a half of men will be in France. Fifteen thousand medical officers will be required for that army alone. There are today on active duty 15,174 officers of the Medical Reserve Corps.

"Within the next two or three months the second draft will be made, to be followed by other drafts each of which will require its proportionate number of medical officers. At this time the available list of the Reserve Corps contains an insufficient number of officers to meet the demands of this draft.

"I cannot emphasize too strongly the supreme demand for medical officers. It is not now a question of a few hundred medical men volunteering for service, but, it is a question of the mobilization of the profession that in the large centers of population and at other convenient points, as well as at all Army camps and cantonments, boards of officers have been convened for the purpose of examining candidates for commission in the Medical Reserve Corps of the Army. An applicant for the Reserve should apply to the board nearest his home.

"The requirements for commission in the Medical Reserve Corps are, that the applicant be a male citizen of the United States, a graduate of a reputable school of medicine, between 22 and 55 years of age, and professionally, morally and physically qualified for service.

W. C. GORGAS,

Surgeon General, U. S. Army.

Washington, D. C.

[It should hardly need any remarks on our part in support of this appeal for more medical officers. The medical service of the army is so vital a part of our fighting equipment that the need, the absolute necessity of a medical personnel sufficient for all requirements of the army is self-evident. Even at the possible cost of a smaller sup-

ply of physicians at home, the needs of the army and navy must be supplied. This is the primary and most important duty before us. Won't you, every one who can at all be spared from home, make up your mind now, NOW, to apply for a commission in the Medical Reserve Corps?—Ed.]

#### REEDUCATION AND REHABILITATION OF DISABLED SOLDIERS

At the forthcoming meeting of the American Medical Association, to be held in Chicago, June 10 to 14, the section on miscellaneous topics will take up the subject of reeducation and rehabilitation of disabled soldiers. Physicians who contemplate attending this meeting of the American Medical Association will find the program for the meetings of this section on the various blackboards, and they are urged to attend, because of the great importance of this undertaking.

#### A TREATMENT OF BURNS AND VARICOSE ULCERS WITH WAX DRESSINGS

My attention was first called to the paraffin dressing on receiving a letter from a former classmate, who was in charge of an American hospital in France, mentioning the success that the surgeons of both France and England were having with the application in the burns received while in battle with the Germans and suggested that I try it in my next case. He also sends me a sample of what he was using, which I used on my first case, after that, I ordered one of the American waxes, which consists of paraffin, combined with vegetable and mineral resins and vegetable wax, so as to modify its physical character as regards plasticity, elasticity, and adhesiveness; while 2 percent of eucalyptol is added, to cover the disagreeable odor always present from the burned surfaces.

My mode of application is as follows: Thoroughly cleanse the wound with Dakin's solution,  $\frac{1}{4}$  percent, then dry the surface (if in the office, with an electric-fan dryer). When dry, spray on the melted wax with a thermos atomizer or paint it on with a large camelshair brush, and this solidifies quickly on the wound and outlying edges, giving a smooth, glossy, waxy surface. To this, I apply a very thin layer of absorbent cotton, then spray or paint on a second

layer of wax; this forming an airtight and closely adherent cast, under which the growth of new skin is quickly formed.

The advantage of this dressing over the former dressings of hydrogen peroxide, carron oil, castor-oil, linseed-oil, and ointments is, that it is easy to apply, that patients receive almost instant relief from pain, does not soil clothing like the other dressings. Moreover, it is so very easy to remove dressing; just raise the edge and it comes off in one cast, with no adhesion or disturbance and with little or no pain to the patient, and this feature alone is a great advantage of the old methods.

The following cases are of interest because of the short time required for repair great advantage over the old methods.

Case 1. Mrs. B had on the stove a 1-gallon Karo syrup-can half full of syrup and apples cooking. In trying to remove the tight cover the latter flew off and the contents went all over her face and neck, very severely scalding her. She was brought to the hospital, eyes so swollen she could not see and there was one complete blister all over her face and neck. The serum was let out, the skin clipped off and the wax was painted on, after first cleaning with the Carrel-Dakin solution, and in a few minutes she was free from pain. She was redressed daily for ten days, when she was discharged as well. There is not a sign of a scar-tissue; in fact, two wrinkles under her eyes have disappeared.

Case 2. A negro boy, age 17, fell backward into a fireplace, burning his clothing all off, this resulting in a severe burn of the second degree from the shoulder to the lumbar region. He was dressed by a Negro granny, for five days, with pigs' grease and pine resin, when it became so bad that he had to come to the hospital for treatment. I found that moist gangrene had set in and the odor was so bad you could smell it all over the hospital. I removed the grease-resin with ether and gasoline, then curetted the parts thoroughly to a clean surface, then used Carrel-Dakin solution, dried, and lastly applied the wax dressing. This was removed daily for two weeks, the wound improving each day, when he failed to return. Running across him one day a month later, I asked him why he did not return for treatment. He said, "Boss Doctor, she done all well." Taking him to the office, I found it was true; a new growth of skin had formed.

Case 3. Mrs. D. was at supper when she caught her dress-sleeve in teapot, spilling the tea all over her thighs. She sent for some salve and applied it for eight days, then the odor and pain became so bad she telephoned for me. I found places to be in a very serious condition, the odor being very offensive. I cleaned with the Carrel-Dakin solution and then applied wax dressing. I have done so for the past four days and find a remarkable change for the better—no pain, no odor, and there is indication of a quick recovery.

Case 4. A Negro, age 50. His hand was caught in a belt of the mill, the friction burning off the flesh to the bones. It was dressed at home for five days with pine resin, when the pain became so severe he could not bear it. When he came for treatment, the odor was so disagreeable we had to spray aromatic oils after he left the room. I curetted out the old dead tissue, and he was treated as the preceding cases. He has had seven treatments and now is practically well.

Case 5. A woman, about 50, was carrying a kettle of hot water, when she stumbled and was thrown down, causing the water to go all over her face, neck, and hand. I found her in great pain. I applied Carrel-Dakin solution and the wax dressing, and have done this for the past four days. The pain was relieved at the first dressing. There is no odor, and there is indication of no scar-tissue forming.

Case 6. Mr. R. has had varicose ulcers for the past fifteen years and has had treatment at hospitals north and south at different times, but the ulcers were getting worse all the time, larger and deeper, and he could work only half of the time. I removed the old tissue, applied packs of C-D solution for three days, then started the wax dressing. He was dressed for

two weeks daily, when the tissue was healed over, and then I applied the high-frequency current every other day for two weeks, and now he sees his leg without an ulcer for the first time in ten years.

Case 7. Mr. B. had varicose of the shin extending from the lower third up to the knee. He had been to various hospitals in the middle and eastern states for treatment. He would get some relief from pain, but, was unable to get the ulcers healed over. I applied C-D solution as above and then the wax dressing. He was about his work in a few days, but, his work was such he would break the dressing loose or hit the ulcer. So, after dressing as before, I applied a wire gauze splint bandage, applying the wax also to this, then a cotton gauze bandage. It was completely healed in twenty dressings afterward.

CHARLES WILLIAM LARRABEE.

Helen, Ga.

#### TOXIC ARSPHENAMINE

The director of the Hygienic Laboratory of the Treasury Department, Washington, D. C., calls attention to reports published in current medical literature, of untoward results following the use of arspenamine and neoarsphenamine. It is requested that samples of any lots of these arsenicals that have shown undue toxicity be forwarded to the Hygienic Laboratory for examination.

In sending these samples, it should be made certain that the lot number is the same as that of the ampules in question. The samples sent should, if possible, be accompanied by a brief note stating the approximate body-weight and age of the patient, the dose and dilution of the drug given, the symptoms and final result; that is, whether fatal or not.



# In the World War

## ARMY MEDICAL CORPS EXAMINATIONS

The Surgeon General of the Army announces that preliminary examinations for the appointment of first lieutenants in the Medical Corps, U. S. Army, are being held at numerous points throughout the United States, on the first Monday of each month.

Full information concerning the examination may be procured upon application to the "Surgeon General, U. S. Army, Washington, D. C." The essential requirements to securing an invitation to report for examination are that the applicant shall be a citizen of the United States, between 22 and 32 years of age, a graduate of a medical school legally authorized to confer the degree of Doctor of Medicine, of good moral character and habits, and shall have had at least one year's post-graduate hospital internship.

The government cannot pay to applicants any portion of their expenses incurred in connection with their examination, and due consideration, therefore will be given to localities from which applications are received, in order to lessen such expenses as much as possible.

Chemistry and Physics have been eliminated as subjects of the examination.

Those applicants who successfully pass the examination are commissioned first lieutenants in the Medical Reserve Corps, and sent to either the Army Medical School in Washington, or to a training camp for a course of instruction, covering a period of approximately three months, during which time they draw the pay and allowances of their grade. If, at the close of their instruction, they pass the final examination, and are favorably recommended, they are commissioned first lieutenants in the Medical Corps of the Regular Army.

The Medical Corps consists of commissioned officers in number approximately equal to seven for every one thousand of

the total enlisted strength of the Regular Army authorized from time to time by law, proportionally distributed among the graded and in the ratios as follows: Colonels, 3.16 per cent.; lieutenant colonels, 5.42 per cent.; majors 23.7 per cent.; captains and first lieutenants, 67.72 per cent.

Promotion to the grades of major, lieutenant colonel, and colonel is by seniority, subject to examination.

The Surgeon General, who, under the present law has the rank of brigadier general and is the chief of the Medical Department, is selected from among the officers of the Medical Corps not below the grade of lieutenant colonel.

### As to Pay and Emoluments

To each rank is attached a fixed annual salary, which is received in monthly payments, and this is increased by 10 per cent. for each period of 5 years' service until a maximum of 40 per cent. is reached. A first lieutenant receives \$2,000 per annum, or \$166.66 monthly. At the end of five years (*during the period of the war, at the end of one year*) he is promoted to captain, subject to examination, and receives \$2,400 a year, with an increase of 10 per cent. after five years' service, making \$2,640, or \$220 per month. After 10 years' service the pay would be \$2,880 annually, or \$240 per month. The pay attached to the rank of major is \$3000 a year, which, with 10 per cent. added for each five years' service, becomes \$3,600 after 10 years' service, \$3,900 after 15 years' service, and \$4,000 after 20 years. The maximum monthly pay of lieutenant colonel, colonel, and brigadier general is \$375, \$416.66, and \$500, respectively. Officers, in addition to their pay proper, are furnished with allowance of quarters according to rank either in kind, or, where no suitable Government building is available, by commutation; fuel and light therefor are also provided. When traveling on duty an officer receives mileage for the



distance traveled, including the travel performed in joining first station after appointment as first lieutenant. On change of station he is entitled to transportation for professional books and papers and a reasonable amount of baggage at Government expense. Groceries and other articles may be purchased from the commissary at about wholesale cost price. Instruments and appliances are furnished for the use of medical officers in the performance of their duties. Well-selected profes-

ity incurred in the line of duty. On attaining the age of 62 years officers go on the retired list by operation of law. Retired officers receive three-fourths of the pay of their grade (salary and increase) at the time of retirement.

At the present time there are approximately seven hundred vacancies in the Medical Corps.

#### THE NEEDS OF THE MEDICAL SERVICE

Before the last meeting of the Southern Medical Association, Lieut-Col. R. E. Noble, M. C., U. S. A., presented a paper which convincingly answers the many questions that have caused perplexing hours of thought to many doctors. The com-



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A traveling dental office—in an automobile.

sional libraries are supplied to each hospital, and standard modern publications on medical and surgical subjects, including medical journals are added from time to time. At each military post there is also a laboratory, and medical officers are encouraged to carry on any special line of professional study which appeals to them and which fits them for their duties as medical officers.

Officers of the Medical Corps are entitled to the privilege of retirement after 40 years' service, or at any time for disabil-



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American Troops Ready for Gas Attack.

munication appears in full in the December issue of *The Southern Medical Journal* and should be read by every doctor in this country. In a previous paper, the same writer declared that "the medical profession has a heavy responsibility, for, with it rests the subject of medical preparedness."

We have not a sufficient number of medical officers to care for the combatant and other forces now in training. With the new draft soon to be called and the possibility of the raising of an army of between five and ten million, as has been authoritatively foreshadowed, we must become deeply conscious of our responsibility and worthy of the trust placed in us.

The responsibility of the medical profession of the United States and its importance in the successful outcome of the war can not be too forcibly impressed upon every doctor who is mentally and physically

fit and within the age limit, and each one is urged to offer his services now.

That the Surgeon-General should have an immense corps of medical-reserve officers upon which to draw, enabling him to place the individual where he will be best fitted for the service, is, manifestly, apparent. This will mean efficiency, and by efficiency alone can the responsibility now resting upon the medical profession of this country be lessened.

Apply at once for a commission in the Medical Reserve Corps and thus relieve the responsibility which you owe to your country, your profession, and yourself.

### VOCATIONAL TRAINING OF DISABLED SOLDIERS AND SAILORS

That 100,000 out of every 1,000,000 soldiers sent overseas will return disabled to the United States during the first year of fighting, and that 20,000 of these will need some kind of vocational reeducation or rehabilitation, is the estimate made by the Federal Board for Vocational Education, in Senate Document 166.

"Long before the close of activities in the summer of 1918, the return of men will be-

occupations of every disabled soldier and sailor is presented by the federal board. This plan involves a central administrative agency at Washington, the coordination with that agency of every federal and state agency concerned and with similar public, semipublic and private agencies, the establishment of "curative workshops" for the treatment of war-cripples, together with a



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American Ambulances and Drivers in Milan, Italy.



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Tests for Mentality.

gin; and vocational reeducation must start with the first men sent back, and must be developed as the number of men in hand for training increases," declares the report. "The development of facilities for undertaking vocational reeducation must, in fact, anticipate the return of the men, since adequate provision cannot be improvised after the men are actually in hand for training."

A comprehensive federal system for the reeducation and placement in wage-earning

complete system providing for subsistence and pay of the crippled soldiers during the period of reeducation.

Basing its opinion upon foreign experience, the report declares that "vocational rehabilitation can not be regarded as costing the community, except temporarily, anything whatever. The disability of the soldier or sailor is an economic handicap reducing productive power. Unless the men are vocationally reestablished, and to the extent that they are not completely reestablished, the economic loss to the community will be cumulative during a long period of years. Even a slight increase in vocational capacity, as a result of vocational training initiated during the period of convalescence, will result in an economic gain which, also, will be cumulative over a long period. This aggregate cumulative gain

will certainly exceed any expenditures for vocational rehabilitation."

The increase of the earning-power of the handicapped man, thus rendering him economically independent, is the ultimate object of this program.

The plea is made that "all the experience and all the special equipment required for

Disabled Soldiers and Sailors—Training of Teachers for Occupational Therapy."

Emphasis is placed on the immediate and pressing demand for the training of teachers of occupational therapy to take care of the handicapped men on their return from France. It is estimated that, for every 1,000,000 men overseas, a minimum of 1,200 teachers will be needed. What, in view of the experience of the belligerent countries, must be the qualifications of these teachers, how they may be trained, what problems are to be met, and how they are to be met in the course of vocational rehabilitation, the social and economic as-



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French Prisoners of War Interned in Switzerland Occupied in Making Toys.

emergency war work will be needed to provide for similar work in the vocational rehabilitation of men disabled in factories and workshops, of the victims of accident in all dangerous employment, and of the thousands of otherwise injured and crippled persons thrown upon the community each year. The number of such persons in normal times greatly exceeds the capacity thus far developed for their vocational rehabilitation."

In addition to the above, the document discusses methods of financing, organizing, and administering a national system of vocational rehabilitation; foreign experience and legislation are reviewed; and the proceedings of an interdepartmental conference held on the subject in Washington are summarized, together with suggested legislation.

#### REHABILITATION OF DISABLED SOLDIERS AND SAILORS

The vocational and educational problems involved in the rehabilitation of disabled soldiers and sailors are analyzed and discussed by the Federal Board for Vocational Education in Senate Document 167, just published under the title, "Rehabilitation of



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French Soldier With Two Artificial Arms Learning to Saw Wood.

pects of rehabilitation, and the need for a national system for the rehabilitation of the maimed and crippled in industry as well as in war are the main topics of the bulletin. The document is written by Elizabeth G. Upham, under the direction of Charles H. Winslow, assistant director for research of the Federal Board.

The emergency program outlined in the report is summarized as follows:

The returned disabled men are divided into four classes: (1) those who are permanently invalided, (2) those who are able

to work, but can not engage in competitive occupations, (3) those who must learn new occupations in the light of their handicaps, (4) those who are able to return to their former occupations. About 30 percent of all the disabled fall into the fourth group, and about 20 percent into the third group. The first two groups are relatively small.

For group 1, the treatment prescribed is, "invalid occupations," which are occupations that help pass the time and save the patient from brooding. For group 2, those who will, in all probability, be unable to compete in any line of work, simple occupations are prescribed to be carried on under the guidance of occupational therapists. Such occupations as wicker-furniture-making, chair-caning, toy-making and semitrades will be taught these men.

For the 20 percent who must learn new occupations, a more elaborate course of rehabilitation is suggested. This will include simple occupations, such as are taught to the men of the second group, followed by courses in general education wherever necessary, and followed in turn by prevocational education, that is to say, elementary vocational education; and, lastly, by vocational education in whatever line is best adapted to the qualifications and handicap of the man.

A similar curriculum is proposed for the 30 percent who will probably be able to return to their old occupations. Under the lead of the occupational therapist, the patient will be gradually taught simple occupations, his general education will be "brushed up" and the deficiencies supplied, and he will be reeducated so as to enable him to resume his former trade despite his handicap.

The Federal Board presents in this bulletin an outline of an emergency course covering eight weeks for the training of teachers who are to handle all four groups of disabled men. It is expected that a certain percentage of the disabled men themselves will serve as instructors. Nurses and teachers of arts and crafts will be available for the invalid occupation work; trained and selected women of education with previous experience in the arts, crafts, and the semitrades will be drawn upon to teach simple occupations to group 2. In addition to these, there will be need in groups 3 and 4 of vocational teachers, preferably men,

and men and women teachers in general education subjects, instructors in manual training, commercial subjects, mechanical drawing, drafting, et cetera. Teachers of each group should have had practical experience in hospitals or institutions, and it is recommended that teachers in groups 3 and 4 should have experience in the same line of work as in the military hospitals of Canada.

That every dollar invested by the Government in the vocational rehabilitation of disabled soldiers and sailors will bring handsome returns in national efficiency, is maintained in the report.

"If the war should finally end in economic exhaustion," says the report, "that nation will ultimately triumph which is best able to use over again its men. It is claimed that Germany uses 85 to 90 percent of its disabled men back of the lines, and that the majority of the remaining 10 to 15 percent are entirely self-supporting. Belgium, whose depletion has been the greatest, was the first nation successfully to use over again its men. Not only has the large Belgium reeducation-center of Port Villez been self-supporting, but, in addition, it has paid back to the Belgium government the entire capital cost of installation. Economic necessity has made possible the results achieved in Belgium. For the other nations not so hard pressed, the rehabilitation of the disabled and the strengthening of the vitality of the civil population may be an important and perhaps a determining point in their economic future. It is certain that our own economic future depends to a large extent upon the rehabilitation of those disabled both in war and industry."

The bulletin discusses at length the possibilities of development of occupational therapy and the equipment needed for all the groups described. Suggested blanks for keeping the records in the curative workshops and for hospital registration are included.

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#### WAR AND NAVY DEPARTMENTS COMMISSIONS ON TRAINING CAMP ACTIVITIES

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We are informed that the War and Navy Departments Commissions on Training Camp Activities have formed a Social Hygiene Division under the head of Major

William F. Snow of the Surgeon General's office. The work of the division will be entirely educational, and will be divided into three sections with Drs. Davis, Zinsser and Clarke as directors.

Section one will be under the direction of Lieut. Walter Clarke, who will continue the educational work that he has been doing in the cantonments of the country for some time with the full cooperation of the War Department. Lieutenant Clarke supervises a large staff of lecturers on social hygiene. The lectures given are compulsory with the men in the camps, and exhibits and literature are used in connection with them.

Section two, to be known as the section on Men's Work, will have as its director William H. Zinsser, and will concern itself with the education of men in civilian communities. This work was formerly under the direction of the Council of National Defense, but is now transferred to the Social Hygiene Division under the Commission on Training Camp Activities.

Dr. Katherine B. Davis will direct section three, which has as its purpose the education of women and girls. In connection with this work a lecture bureau will be maintained in cooperation with the Social Morality Committee of the War Work Council of the National Y. W. C. A., the American Social Hygiene Association and similar organizations, which have also previously cooperated with the directors of sections one and two in their work. This bureau will supply lecturers to groups of women and girls in all parts of the country and furnish them with literature and exhibits. The work of this section will be intensive in industrial communities as well as in communities adjacent to camps.

#### SCHOOL INSPECTION IN EXTRA-CANTONMENT ZONES

We learn from a recent number of *Public Health Reports* that medical inspection of school children is one of the activities undertaken by the United States Health Service, to prevent the carrying of communicable diseases to the troops. Such inspection has already been started in practically all of the zones surrounding the army cantonments.

An officer of the service is detailed to give his full time to the work and has an

office and the assistance of school nurses or other help. The expenses, as a rule, are met jointly by the Red Cross, the local health authorities, and the Public Health Service. Regular inspection of the work is carried on by a service expert familiar with the best standards of school hygiene.

In but few of the places where this work has been begun had school inspection been previously practiced and in none had the full-time service of a physician been devoted to it. Now, with a skilled officer giving his full time to the work in each locality, much is expected to be accomplished. In communities where school inspection has been adequately carried out, the result has been a remarkable reduction in the incidence of contagious diseases in the general population. The same result is expected around the cantonments.

The plan is for the service officer and nurse, through co-operation with the teachers, to keep a close watch upon each school for the early detection of contagious diseases. The parents are then notified, the quarantine rules are enforced, vaccination is practiced where it fits the case, and all possible is done to prevent the disease from reaching the cantonment.

The protection of the troops is the great benefit to be derived from school inspection but others are not overlooked. While all children in the areas around the cantonments are examined at intervals frequently for communicable disease, they are also to be examined at least once a year for physical defects. These defects tend to lower individual resistance and increase the susceptibility of a child to contagious diseases; they also retard intellectual development and prepare the way for degenerative diseases in later life. When the defects are found, the parents are informed and urged to have them corrected. The great number debarred from the army and navy recently, because of physical disability, indicates that many such defects, which could have been corrected in childhood had they been known, remained uncorrected, with a resulting loss in national efficiency at this crucial moment.

This is a work that commends itself to every physician, to every citizen, as productive of good results in various directions. It deserves our wholehearted support.



# Just Among Friends

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

IN my reading this winter, I have been interested in the allusions to doctors, which I have found scattered here and there through the various volumes I have perused. An author's comments on members of our profession may be as interesting to you as they have been to me, so this month I will quote a few of them.

Here is something from the *Journal Intime* of Henri Frederic Amiel. In August, 1873, he was indisposed and consulted a physician. He has the following to say about doctors:

"Why do doctors so often make mistakes? Because they are not sufficiently individual in their diagnosis or their treatment. They class a sick man under some given department of their nosology, whereas every invalid is really a special case, a unique example. How is it possible that so coarse a method of sifting should produce judicious therapeutics? Every illness is a factor simple or complex, which is multiplied by a second factor, invariably complex—the individual, that is to say, who is suffering from it—so that the result is a special problem, demanding a special solution, the more so the greater the remoteness of the patient from childhood or from country life. The principal grievance which I have against doctors is, that they neglect the real problem, which is, to seize the unity of the individual who claims their care. Their methods of investigation are far too elementary; a doctor who does not read you to the bottom is ignorant of essentials. To me, the ideal doctor would be a man endowed with profound knowledge of life and of the soul, intuitively divining any suffering or disorder of whatever kind, and restoring peace by his mere presence. Such a doctor is possible. But, the greater number of them lack the higher and inner life, they know nothing of the transcendent laboratories of

nature; they seem to me superficial, profane, strangers to divine things, destitute of intuition and sympathy. The model doctor should be at once a genius, a saint, a man of God."

In the first book that Thoreau published—"A Week on the Concord and Merrimack Rivers"—he wrote (August, 1839) in part as follows:

"There are sure to be two prescriptions diametrically opposite. Stuff a cold and starve a cold are but two ways. They are the two practices always in full blast. Yet, you must take advice of the one school as if there were no other. In respect to religion and the healing art, all nations are still in a state of barbarism. In the most civilized countries, the priest is still but a Powwow and the physician a Great Medicine. Consider the deference which is everywhere paid to a doctor's opinion. Nothing more strikingly betrays the credulity of mankind than medicine. Quackery is a thing universal and universally successful. In this case, it becomes literally true that no imposition is too great for the credulity of men. Priests and physicians should never look one another in the face. They have no common ground nor is there any to mediate between them. When the one comes, the other goes. They could not come together without laughter or a significant silence, for, the one's profession is a satire on the other's, and either's success would be the other's failure. It is wonderful that the physician should ever die and that the priest should ever live. Why is it that the priest is never called to consult with the physician? Is it because men believe practically that matter is independent of spirit? But, what is quackery? It is commonly an attempt to cure the diseases of a man by addressing his body alone. There is need of a physician who shall minister to both, soul

and body, at once, that is, to man. Now he falls between two stools."

We still are in need of such physicians. When will the profession learn that there is something beyond what we can determine by physical examination and laboratory analysis? In a delightful book, "A Journey to Nature," by J. P. Mowbray, and which I heartily recommend to every doctor, I am introduced, in the first chapter—"Scared to Life"—to a very sensible and honest doctor, who, instead of keeping his overwrought patient in town and filling him full of drugs, sent him up to the Catskills for a year's rest. The broker having sent for the doctor, the following conversation (in part) took place:

"What chance have I got?"

The doctor looked at me a moment very much as if he hesitated to tell me the truth. Then he said:

"Well, my boy, it's a tossup whether you live to be seventy-five or drop dead within six months."

I felt a nerve in my face twitch, and he went on:

"I suppose I ought to congratulate you. It isn't every one who has the privilege of going down bow first, all sails set, at full speed, without committing suicide."

I asked him plainly if he could help my chances.

"No," he said bluntly. "It would be an impertinence for me to disturb the intimacy which you have established with sudden death. Besides, mortuary neatness and despatch have been very much maligned. Some men are meant to live right up to the stopping-point, take all there is of life and then exit quickly and quietly without any fuss. It's quite characteristic of the business man of our era. It's what somebody has called eliminating the corporal superfluities."

"Then I am liable to die at any moment, doctor?"

"Why, of course! But, you needn't preen yourself. It's a very common privilege in Wall Street. You prefer it, don't you? I've seen a good deal of dying, and I must say that, as a rule, most of the attempts are tiresome bites at a cherry."

"Doctor," I said, "you will pardon me. I don't quite take your view of it. I prefer to linger and suffer a little. I sent for you,

because you are a doctor, not, a philosopher. What can you do for me?"

"Nothing, except to give the undertaker a clean bill of voluntary *felo de se*. There's only one thing will save you."

"Ah, what is it?"

"A miracle."

"Good heavens, doctor!"

"Yes, sir. Perhaps you have heard the dynamic asses of the world say that a man can not lift himself by his own waistband. I suppose it's true. When you can do that, you will live to be seventy-five—if that's any comfort to you."

"You are brutally frank. I suppose I must submit to my doom; but, I didn't send for you to sentence me."

"Sentence you? Confound it, you sent for me to make a monkey of me. What would you think of a man who ate cyanide of mercury every morning and sent for me to give him some medicine that would prolong his life?"

"You can not give me any treatment—is that it?"

"Yes, I can. I can put the whole pharmacopeia into one word and give it to you, but, you will not take it. It's bitter, but, it might cure you."

"Give it to me."

"Stop!"

"Do you mean, give up my business?"

"Give up everything. Stop living for a year, and live. If you don't want to die, let Wall Street die. You can not both live together."

"Am I to understand that I can avert an organic disaster with care?"

"No, you are bringing it on with care. Stop caring. Go away. Forget—and you will lift yourself by your waistband out of an early grave."

The patient took this excellent advice of the doctor and went up into the Catskill mountains. Some months after, the Doctor paid him a visit, and here is a bit of their conversation:

"How do you sleep?" asked the Doctor.

"Do you know?"

"No, I have lost interest in the operation."

"Good! Can you eat without a menu and stop without tipping somebody? Good! Does salt junk at certain ecstatic moments look to your purged vision like the staff of life? Good. You can't spread the morn-

ing paper out beside your plate and cram your stomach at the same time? Good. You'll live to be eighty-five if you keep on!"

"Oh, you better tell me the plain truth at once. I can stand it."

"Dreams?"

"Every day. Can't quite shut off the rubbish of hopes and ambitions."

"Day be hanged! How about the night?"

"Oh, I don't know anything about the night. My system appears to have lost all interest in that."

"Then you're all right. Night is the only important part of man's existence. It's the only time when we ought to stop kicking against the Eternal. If your nights are clean and empty, the unimportant days will take care of themselves. Man is such an infatuated suicide that nature has to drug him once every twenty-four hours to keep him from destroying himself. . . . Say, old man, did it ever occur to you that man is an instrument, very nicely adjusted, but, played upon so continuously by himself that he gets jangled? When he takes his hand off at night, the Great Tuner steps in and fixes up the strings."

"You can never know," he afterward said to me, "how tired a doctor gets of his species. It isn't that he only sees the worst side of it, but, he must contemplate the infatuated determination of his race to be invalids, and the cool assumption of the race that doctors are made only to relieve it of some of the consequences of its own folly. That is what makes a man of my temperament desire to get somewhere at times where there are others than his own species."

"I should like to know," I asked, "if you include me in your species."

"Well, hardly. You're a good deal of a curiosity. The only patient I ever had who did what I told him. I was so incredulous that I had to come up here and see it with

my own eyes. You deserve to live forever."

"There wasn't much merit in it. You scared me into it."

He laughed.

"You were smart enough to rouse my will power," I said, "to a panicky point of renunciation."

"Will-power. There you go. I've heard about will-power till it makes me weary. The whole finite world has gone crazy on will-power. There is a new quackery in the market made to fit it, which prescribes will-power instead of morphine. 'Exert your God-given volition,' it cries, 'and rise above physical evils.' But, not one of its quacks can add or subtract a heart-beat by will-power, or contract an involuntary muscle. Will-power is the sovereign slave-driver of the material world. It removes mountains; but, I'll be hanged for a mountebank if it can remove remorse or set the jig for an overridden heart. Man will go on with his will-power till he has used up all the material forces of this globe, and then, if he can not get to any other, he will die of ennui. I always say to a patient of mine: 'Don't give me any of that will-power nonsense, if you please. Just take your hand off the machine for a little while, and perhaps it will regulate itself. Did it ever occur to you that there might be some will-power in the universe lying around loose that wasn't yours? If I can get a patient to stop self-focussing himself for awhile, I feel quite certain that some kind of regulative energy will drift into him. Now, then, what time do you go to your lunch?"

Great stuff! This doctor evidently knew what the superconscious mind can do. He was sensible; he was honest; and I doubt not that, being so wise a man, he was scientific, too.

[To be continued]



# Among the Books

## CARREL AND DEHELLY: "INFECTED WOUNDS"

The Treatment of Infected Wounds. By A. Carrel and G. Dehelly. Translation by Herbert Child. With an introduction by Sir Anthony A. Bowlby. New York: Paul B. Hoeber. 1917. Price \$2.00.

One of the most important lessons of the war is, the effective treatment of war-wounds and, by inference, wounds received in industrial accidents or wherever there exists a possibility of infection. Against the preconceived notion prevailing almost generally before the war, that the antiseptic treatment of wounds was improper (for the reason that, theoretically, it was held to be incorrect), the early experiences in field- and base hospitals demonstrated very soon that asepsis is out of the question under war conditions and the treatment of wounds based upon theoretical considerations failed to prevent or arrest suppuration.

Under these circumstances, it was fortunate that Doctor Carrel returned to the principles laid down by Lister and that he, together with his associates, investigated and eventually perfected the Listerian teachings of antiseptic wound treatment. The volume before us contains in a practical and usable form the results of Carrel's investigations and a guide for their application in practice. The necessity for such a guide, even when we are in possession of a remarkably effective and all but ideal antiseptic substance, is vindicated by the senior author when he says:

"The mere application of an energetic antiseptic substance by any form of technic whatsoever can not be relied upon to sterilize a wound. The success of the method which enables us to render aseptic an infected wound is not due to the marvelous properties of a new drug. It should rather be attributed to a combination of means, which enables us to make use of a definite antiseptic substance under such condition of concentration and duration that its action becomes efficacious. This

method is a combination of which each single part is essential to the rest. The antiseptic can not be altered without changing the manner of using it. In the same way, a modification of the technic demands an antiseptic endowed with different chemical properties."

The book itself deals successively with the principles of the technic; the technic of the manufacture of Dakin's solution; the technic of the sterilization of wounds—mechanical, chemical, and surgical cleansing; the technic of the sterilization of wounds—chemical sterilization; clinical and bacteriological examination of the closure of wounds; the results.

This little book is chuck-full of good things and should, certainly, be studied by every medical man who does any surgical work at all.

## DUMAS AND CARREL: "TECHNIC OF THE CARREL METHOD"

Technic of the Irrigation Treatment of Wounds by the Carrel Method. By J. Dumas and Anne Carrel. New York: Paul B. Hoeber. 1917. Price \$1.25.

Of the authors of this little book, Doctor Dumas is a close friend and colleague of Doctor Carrel, and Anne Carrel is the Doctor's wife. In the introduction by Doctor Keen, a warm tribute is paid Madame Carrel, who, as a helpmate, "has been so valiant an assistant in all his researches, both in this country and in France".

This little book is not intended to supplant the more complete treatise on the subject, written by Doctor Carrel and entitled "The Treatment of Infected Wounds". It deals, rather, with the work to be done outside of the operating-room. Thus, it takes up the materials used in the Carrel dressing; explains how the wound secretions are to be examined microscopically, and the significance of the findings; and how they are to be interpreted in the treatment of wounds. Several pages are given up to the dressing and the irrigating-apparatus—how they are prepared by the

nurses and attendants—while the technic of irrigation is described with some little detail. Of special interest to the pharmacist, is the chapter on the preparation of the Dakin solution. There is supplied, also, a very complete glossary and an excellent index.

Every physician who is using the irrigation treatment of wounds according to the Carrel method should, certainly, be supplied with these facts, which will be found useful in the everyday experience of his assistants.

#### KEEN: "WAR WOUNDS"

The Treatment of War Wounds. By W. W. Keen, M. D., LL.D. Illustrated. Philadelphia: The W. B. Saunders Company. 1917. Price, \$1.75.

This book constitutes a report compiled at the request of The National Research Council, and is a review of the experiences of numerous surgeons at the front as they were published in the medical journals of France, England and the United States or communicated to the author personally by letter. Although the author modestly declares that his knowledge is necessarily second-hand, as he has been unable to visit the hospitals in Europe, his wide experience and his keen surgical sense rather more than make up for this drawback—if it is a drawback. The author has the advantage of an interested onlooker who receives first-hand information from all sides and, therefore, is enabled all the better to draw impartial conclusions than if his activities and observations were limited to a special locality.

Doctor Keen's review of the treatment of war wounds is of tremendous interest, not only to medical men in service, but fully as much to us at home. The picture that he draws is graphic and highly instructive; and the Reviewer does not employ a mere formula but speaks with serious intent when he says emphatically that this book should be studied closely by every medical man.

The most striking feature of modern experiences in war wounds is, that, while Lister taught us how to *prevent* infection, Dakin and Carrel, following Lister's principles have taught us how to *conquer* even rampant infection. From the numerous reports at hand the author comes to the conclusion that the method of Carrel and

Dakin has shown results much superior to all others. In consequence, he enters into this particular method in considerable detail.

Doctor Keen's volume, small as it is, is so full of important information that it is difficult to review it, it can only be commended for study and this study must be urged strongly.

#### SOME RECENT PUBLICATIONS

The following books were received too late for review in this issue. They are, however, of immediate importance and would suitably have been considered in a special war number like the present one. The Reviewer, therefore, announces them here:

American Addresses. By Sir Berkeley Moynihan, M.S., F.R.C.S. Philadelphia: The W. B. Saunders Company. 1917. Price \$1.75.

War Nursing: A Textbook for the Auxiliary Nurse. By Minnie Goodnow, R. N. Illustrated. Philadelphia: The W. B. Saunders Company. 1918. Price \$1.50.

Principles of Surgical Nursing: A Guide to Modern Surgical Technic. By Frederick C. Warnshuis, M.D., F.A.C.S. With 255 illustrations. Philadelphia: The W. B. Saunders Company. 1918. Price \$2.50.

The Principles of Hygiene: A Practical Manual for Students, Physicians, and Health Officers. By D. H. Bergey, A.M., M.D. Sixth Edition, Thoroughly Revised. Philadelphia: The W. B. Saunders Company. 1918. Price \$3.50.

#### O'BRIEN: "FOOD PREPAREDNESS"

Food Preparedness for the United States. By Charles O'Brien. Boston: Little, Brown & Co., 1917. Price 60 cents.

The author intends, in this book, to point out to the individual some of the factors involved and the lessons to be learned from the experiences of the European nations at war, particularly Germany, where food control has been most necessitous and most highly developed. It is made evident by the discussion of the author and by the data supplied by him that the United States is far from utilizing its resources for growing, harvesting, and handling food to the best possible advantage, and that many useless and wasteful methods are in vogue. Considering the fact that the problem of



food preparedness is one of the most important ones in conducting a war, this little book should be made use of widely for the purpose of informing the people of the salient facts and thereby showing them the absolute necessity of cooperating with Mr. Hoover's department in the wise use and conservation of all foodstuffs. This is an economic war-measure the urgency of which should be self-evident, and which should require no urging or persuasion, since compliance with the regulations in this respect are conducted by the laws of self-interest, to say nothing of the patriotic appeal.

#### **PENHALLOW: "MILITARY SURGERY"**

*Military Surgery.* By Dunlap Pearce Penhallow, S. B., M. D. With Introduction by Sir Alfred Keogh, K. C. B. Second edition. London: Henry Frowde, Oxford University Press. 1918.

This treatise on military surgery, the first edition of which was reviewed in this department less than a year ago (see June, 1917, p. 467), illustrates the rapid evolution of methods in the treatment of modern war-wounds and also the constant readjustment of ideas and theories concerning the best treatment. As the author says in his preface, theories that even a short time ago were considered sound have now, in many instances, been discarded, because superseded by more efficacious methods. The chapter on treatment has, accordingly, been entirely revised, the discussion of the methods being brought up to date so far as possible. As the book is a faithful reflection of the actual work being accomplished at the present time and as it is written by an American surgeon who has been in active war service for several years, it thereby gains interest and value for the American medical man.

#### **"SPLINTS AND APPLIANCES"**

*Manual of Splints and Appliances for the Medical Department of the United States Army.* New York: Oxford University Press. 1917. Price 75 cents.

This manual records the results of the deliberation of a board of medical officers directed to investigate and report upon the advisability of standardizing certain appli-

ances to be employed and issued by the medical department of the United States Army. Its findings were based upon the opinion that the splints and appliances officially adopted by the American Army should possess efficiency and correct mechanical principles, simplicity of design, low cost of construction, and transportability that is, they should be suitable for application at the fronts and should remain in place until the patient reaches the base hospital. The manual presents description of a large number of splints and other appliances suitable for injuries, not only as they occur under war conditions, but, also as they may be observed in industrial accidents. The utility of the manual, therefore, is not limited to military surgery, but, is available to the general practitioner as much as to the human surgeon.

#### **BLAIR: "SURGERY OF MOUTH AND JAWS"**

*Surgery and Diseases of the Mouth and Jaws: A Practical Treatise on the Surgery and Diseases of the Mouth and Allied Structures.* By Vilray Papin Blair, A. M., M. D. Third edition. With 460 illustrations. St. Louis: The C. V. Mosby Company. 1917. Price \$6.00.

This volume is another one of those, revision and republication of which has become necessary through the war. In view of the many instances in which plastic surgery is called for for the restoration of function after injuries of the face and also for the purpose of securing the best possible cosmetic effects, the work before us, which really is an excellent one, is most timely. It may be said, incidentally, that the author is in charge of the subsection of plastic and oral surgery, section of surgery of the head, in the office of the Surgeon-General of the United States Army.

#### **DEMENTIA-PRÆCOX STUDIES**

For several years, Dr. Bayard Holmes, of Chicago, has sent out reprints of many articles bearing the general title of "Dementia-Præcox Studies." The study of the difficult subject of dementia præcox was forced upon Doctor Holmes, and was undertaken by him in the realization that there existed a culpable dearth of knowledge regarding this subject in psychopathic medi-

cine. Doctor Holmes organized and now is conducting a psychopathic laboratory, in which he is devoting all his efforts to the elucidation of the many problems associated with this grave malady.

The results of his own investigations and of those of others are to be made available, in future, by means of a quarterly journal called *Dementia-Præcox Studies*, the first number of which has made its appearance. The contents, as well as the list of contributors, promise well for the future of this new periodical, to which the Reviewer offers his cordial good wishes. There can be no doubt about the need of such a publication, and it is to be hoped that all physicians who are interested in the treatment of psychic disturbances will subscribe for this journal.

*Dementia-Præcox Studies* is published under the auspices of the Society for the Promotion of the Study of Dementia Præcox, No. 30 North Michigan Avenue, Chicago. It is to appear quarterly, the subscription price being \$5.00 a year. Single copies, \$1.25.

#### "MEDICAL CLINICS OF NORTH AMERICA"

The January number of *The Medical Clinics of North America* (vol. I, No. 4) is a "Boston Number" and contains clinics and contributions by many of the leading clinicians of that city. While all articles that fill the 200 pages of text are interesting, our attention is attracted by that of Dr. Henry A. Christian on heartblock, the one by Dr. Elliott P. Joslin on severe diabetes, further, Dr. John Lovett Morse speaks on empyema in children, Dr. W. P. Graves on ovarian organotherapy, and Dr. Charles J. White on premature loss of hair. In addition to these, there are many other valuable contributions.

*The Medical Clinics of North America* is published bimonthly by The W. B. Saunders Company, at a subscription price of \$10.00 per year.

#### "PROGRESSIVE MEDICINE"

The March number of *Progressive Medicine* contains reviews of the literature on surgery of head, neck, and breast, also of the thorax; then a number on infectious diseases including acute rheumatism,

croupous pneumonia, and influenza. In this part, much attention is devoted to the consideration of infantile paralysis (poliomyelitis). Further discussions refer to diseases of children, also to diseases of nose, throat, and ears.

*Progressive Medicine* is a quarterly digest of advances, discoveries and improvements in the medical and surgical sciences, edited by H. A. Hare, and is one of the standard publications that enable the physician to keep up with the progress recorded in medical literature. It is published by Lea & Febiger, Philadelphia and New York, at \$6.00 a year.

#### "INTERNATIONAL CLINICS"

The first volume of the 1918 series of *International Clinics* contains clinical lectures on various topics. In addition, there are monographic articles on joint affections, on hernia of the lung, on pathologic conditions of the nails; lastly, attention is given to the treatment of shell- and gunshot-wounds and to the sterilization of infected wounds with dichloramine-T. These are only some of the topics discussed in the volume.

*International Clinics* is a quarterly of illustrated clinical lectures and especially prepared original articles. It is edited by H. R. M. Landis, with the collaboration of many leading physicians and surgeons. The publishers are The J. B. Lippincott Company, of Philadelphia, and the price per volume is \$2.50.

#### PORTER: "HYGIENE AND PUBLIC HEALTH"

Elements of Hygiene and Public Health: A Textbook for Students and Practitioners of Medicine. By Charles Porter, M. D. With 98 illustrations. London: Henry Frowde, Oxford University Press. 1917. Price, \$4.15.

This treatise was written deliberately for the purpose of supplying the needs of the medical practitioner in relation to questions of public health and disease prevention. Accordingly, it is less technical and less cumbersome than the customary textbooks on the same subject, and, possibly, for this very reason, of greater service to the general practitioner who desires the necessary information presented to him in a concise and brief form.

# Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

## Queries

QUERY 6374.—“Rigidity of the Sternomastoid Muscle in an Infant. Persistent Vomiting.” C. P. F., Idaho, asks: “What is the cause and best treatment for rigidity and swelling of the left side of the neck in a 5-weeks old nursling? It seems confined to the left sternomastoid muscle and contiguous structures near the mastoid process and the angle of the jaw, causing pain and impaired motility. Only once before did I encounter such condition, this then being bilateral and the rigidity almost bonelike.”

I should like to be advised, also, in the next case, that of almost continuous vomiting of each feeding; during the day only, in a 3-months old nursling, a boy, who retains, however, the evening and night nursings, rests in comfort all night, but, begins his struggles anew with his morning's supply. The attacks, lasting fifteen to thirty minutes in all, begin with whining, signs of gastric irritation, which increase to pain, loud crying, violent squirming, and terminate in repeated vomiting of partly curdled milk.”

We are inclined to believe that the rigidity and swelling of the left side of the neck in the 5-weeks old nursling (case 1) is due to some trauma incurred during delivery. It would seem, from the brief description you give, that there is no glandular involvement, therefore, we should content ourselves with the application of some very mild iodine unguent.

As for case 2, you can readily understand that the nursling who begins to vomit after the first morning feeding must be very carefully studied, in order to arrive at a definite diagnosis.

In the first place, it is possible that the child receives the night nursing in the recumbent position, while the morning and

day nursings may be given in the ordinary position across the mother's breast.

Again, there is a possibility that the mother's milk differs materially after a night's rest and we should, therefore, suggest that it be examined. The child may suffer from hyperacidity and it might be an excellent idea to give a small quantity of milk of magnesia before the morning nursing. This suggestion is based upon your statement that the child repeatedly vomits partly curdled milk. Another excellent plan in these cases is, to give a few dropperfuls of warm thin barley-water before the child is put to the breast. Also, the mother should draw off an ounce or so of milk with a breast-pump before nursing.

If you will give us a clearer idea of the general conditions, age and health of the mother, and character of the baby's stools, and send, at the same time, specimen of the mother's milk (or, better still, two specimens, one taken at night and the other the first thing in the morning) to a good pathologist for a report, we may be in a position to serve you more intelligently.

QUERY 6375.—“General Anasarca: Leukemia?” L. L. F., Missouri, describes the case of a girl, eight years old, whom he has been treating for several months, but apparently without any beneficial results. The patient “is swollen from head to feet; that is to say, she has a dropsical condition of her entire body, but, there never has been much water in the abdominal cavity. Some fluid passes when there is an action of her bowels. The bowels move regularly and the kidneys appear to be acting freely. Digestion apparently is very good. The disposition is generally cheerful.”

A diagnosis of leukemia has been made, but, our correspondent by no means is

positive as to the causative factor. "There is considerable anemia. Two of the girl's aunts died of white-swelling and the father had a dropsical leg, when a boy, terminating in a running sore."

As you are aware, leukemia is a comparatively rare disease in childhood and is more frequent in males. In a small number of cases, heredity must be considered as an etiologic factor. The disease may follow syphilis, rickets, malaria or even simple anemia.

Naturally, enlargement of the spleen should be detectable or, if the lymphatic form of the disease exists, any of the most external glands may be affected.

In order to arrive at a diagnosis, a very careful examination of the patient must be made, and it would be necessary to have a much clearer idea of earlier conditions. The blood and urine must, of course, be examined.

The child does not seem to have had any hemorrhages, neither do you mention dyspnea or the presence of a weak, rapid pulse. Late symptoms, of course, are either dropsy of the extremities or general anasarca, hemorrhages, diarrhea, headaches, weakness, attacks of fainting; fever is quite constant in the late stages; sometimes the temperature will range up to 101° to 103° F.; the urine, as a rule, contains albumin and casts.

In simple anemia, we hardly should expect such marked general anasarca; still, as we already have pointed out, in order to arrive at a positive diagnosis, a blood count is essential. True leukemia, unfortunately, is very little influenced by treatment, though arsenic in rather large doses, with iron and codliver-oil, must be regarded as useful remedies.

We should be inclined, also, in this case, to try apocynin, with perhaps the addition of scillitin in small doses.

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 QUERY 6376.—"Alas! To What Disorders is the Human Frame a Prey." W. T. K., Illinois, has been called to attend a man, seventy-four years old, who "has been afflicted with rheumatism since last September and been treated by many doctors. He has had three specialists recently, the last one seeing him in the first week of the present month. I was given permission to read the final report and findings:

"(1). Cataract, more decided in left eye; (2) pyorrhea of the gums, many teeth in-

fect; (3) labyrinthine disease in the left ear, producing vertigo and ringing in the ears; (4) general arteriosclerosis, with arteriosclerotic changes in the vessels of the heart; (5) emphysema of the lungs; (6) enlarged prostate gland; (7) osteoarthritis of left hip, sacroiliac joint and spine, hypertrophic type. Laboratory findings: (1) Urine, single specimen: Color, light-straw; specific gravity, 1010; reaction, acid; dextrose negative; faint trace of albumin; occasional pus-cell; casts and erythrocytes negative. (2) Blood: Leukocytes 13600; erythrocytes, 4,350,000; stained smear normal. Wasserman negative.

"Another man, from St. Louis, diagnoses cancer of the rectum. Still another claims that the enlargement of the prostate gland is that which comes with old age. "I told his wife that I could subscribe to but very little of this. I found him in a chair, complaining of pain in shoulder and hip. He can not walk; says, the limb would give 'way with him at the hip.' He has never had to work, and (I think) dissipated in his younger days. Temperature and respiration normal, pulse 120 and weak. Sleeps well, except to awaken at times, to void urine. Is constipated, has foul breath and a foul, dirty tongue, bowel passages are rank. Has enlarged prostate gland. Has a weak stomach; very seldom vomits, but, complains of sick feeling and desire to vomit.

"I have started elimination and it has done much good; his breath is sweeter and tongue clearing; he looks brighter, feels better, and pulse and heart-action are decidedly better—pulse 88."

We hesitate somewhat to prescribe for this 74-year-old man, especially if he has the terrific category of diseases discovered by the St. Louis specialists.

True, in a man of seventy-four, we might expect to find cataract and could even congratulate the patient that only one eye is involved. Neither should we be surprised to find more or less pyorrhea; though, again, we could congratulate the patient that he had any teeth left to be infected. But, when it comes to labyrinthine disease, emphysema of the lungs, osteoarthritis, to say nothing of general arteriosclerosis and sclerosis of the vessels of the heart, we are, certainly, compelled to wonder whether euthanasia would not be justified!

Seriously, though, the condition of your aged patient seems to be a grave one and

it he has, as the other St. Louis man claims, cancer of the rectum, in addition to the other maladies, we fear you will be compelled to render a most guarded prognosis.

However, considering the fact that his temperature and respiration are normal and that he sleeps well, we are inclined to take a somewhat cheerful and common sense view of the situation, and believe that, if you continue to eliminate thoroughly, a very marked improvement in the patient's condition will follow—though, of course, we can not expect the enlarged prostate gland to contract or the cataract to disappear under any medication whatever.

Were we in charge of this man, we should ignore the specialist's diagnosis and give rather frequent high enemata of physiologic salt solution; massage the prostate gland; each night insert a simple sedative suppository; place him upon a semifluid diet; besides give papain, diastase, pepsin, with a little charcoal, after each meal. At least three times daily, we should give him cactin and brucine. Once a week, give a few divided doses of calomel and podophyllin.

If the skin is kept active and the old gentleman is cheered up, he may remain with you, for, for these many months or even years.

QUERY 6377.—“Salvation of Pregnancy.” M. C. B., South Dakota, asks what can be done to control “extreme salivation in a primipara, aged twenty-two, probably three months pregnant. The patient has uterine trouble which needs treatment, but, as she lives out in country, 200 miles away, she has to wait for that for about two months.”

This condition is closely related to hyperemesis in that it is caused, probably, reflexly; in fact, salivation is nearly always combined with more or less nausea or even vomiting, beginning, as a rule, in the second month of pregnancy and ceasing in the fifth or at the period of quickening. It is a fact that ptyalism occurs most often in neurotic women though it may be a familial characteristic.

The treatment to pursue is along the same lines as in hyperemesis. Probably 10 to 15 grains of sodium bromide three times daily best meets the requirements. Atropine or hyoscyamine rarely proves satisfac-

tory, and if given to full effect even are dangerous.

Do not forget that occasionally in so-called “cotton-spitting” cases gingivitis is present: there is loosening of the teeth, some hemorrhage from the gums, and more or less salivation. Always in such cases antiseptic mouth-washes (usually mildly alkaline in character) are indicated. The patient should receive iron and calcium tonics.

If you will give us a clearer idea of the symptoms present in the particular case under observation, we shall be able to serve you more intelligently.

QUERY 6378.—“Treatment of Pertussis.” J. A. C., Mississippi, is “in the midst of an epidemic of pertussis, is not at all pleased with the action of his remedies, and would welcome suggestions both as to treatment and prophylaxis.”

We strongly suggest that you employ the pertussis-combined-bacterin, each mil of which contains 100,000,000 bacillus pertussis, 50,000,000 pneumococci, 50,000,000 streptococci, 100,000,000 each of staphylococci albus and staphylococci aureus, and 100,000,000 micrococcus catarrhalis.

At the same time, bear in mind that pertussis presents three distinct stages: catarrhal, spasmodic, and retrogressive. If correctly treated in the early stages, the disease can, usually, readily be controlled.

It must be remembered, however, that children suffering from rhinitis or some chronic disease of the upper respiratory tract prove bad patients.

The catarrhal stage, during which there is coryza, slight fever, and a dry, irritating cough, ordinarily lasts from ten to fourteen days, although some children “whoop” sooner. Others hardly do so at all. Violent sneezing, vomiting or attacks of faintness may either replace the “whoop” or precede it.

In the catarrhal stage, the present writer finds three remedies sufficient, these being atropine or hyoscyamine (preferably the former), calcium sulphide, and calx iodata. It would be an excellent idea to initiate treatment with several small doses of calomel and podophyllin, followed by a laxative saline. Then, every hour while the child is awake, for two days at least, give 1-6 to 1-3 grain of calcium sulphide and every three hours give 1-3 to



1 grain of calx iodata. Also dissolve ten granules of atropine valerate in 24 teaspoonfuls of water and give of this thirty or forty drops four or five times a day. The pertussis bacterin may be used at this period or later.

When the spasmodic stage is established, this medication is not so effective. Here, rather full doses of lobeloid or stillingoid should be given, together with some such sedative as monobromated camphor, alternated with small doses of atropine, until the face becomes flushed.

Furthermore, nearly all these young patients are benefited by quinine arsenate given after meals.

The nostrils and nasopharynx should be cleansed thoroughly with some mild alkaline antiseptic, and then sprayed with camphomenthol or similar oleaginous preparation. Today, we should feel very much inclined to try dichloramine-T.

In the most severe spasmodic forms, the following may be given: hyoscine hydrobromide, gr. 1-1000; morphine hydrobromide, gr. 1-64; cactoid, gr. 1-128; pilocarpine hydrochloride, gr. 1-128; caffeine, gr. 1-64. This dosage to a child five years or over; the dose to be repeated in three or four hours.

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QUERY 6379.—“Typhopneumnia?” F. A. V., California, seeks information as to the probable character of a peculiar fever which caused the death of a 17-year-old girl—a high-school student—who always had been healthy, strong and normal. “The first symptom occurred when one morning she did not have any appetite and ‘felt sick.’ Upon returning home from the afternoon studies, she was too tired and faint to walk upstairs. Soon afterward, she went to bed, where she remained for three weeks under the care of four doctors and two nurses. Soon a high fever came on, together with delirium and unconsciousness, the latter lasting about one week. However, at different intervals, the patient would become conscious for a brief space of time. Typhoid fever was feared, but, unsimilarities proved the contrary. On the

nineteenth day, pneumonia set in, causing the girl's death. During the last ten hours of her life, her breathing was at the rate of about 70 per minute and the temperature was 107-2°F.

At the necropsy, 7½ inches of the intestine was found to be affected, but, every other part of her anatomy proved perfectly sound and normal. The intestine showed small ulcers less than one-half the size of those found in typhoid fever. Such a case has never been heard of before, here. Can you give some light upon this remarkable malady?”

Unfortunately, you do not state what portion of the intestine was found ulcerated. We also are at a loss to reconcile your statement, “every other part of her anatomy proved perfectly sound,” with the prior statement that “on the nineteenth day [of her illness] pneumonia set in.” Despite minor clinical inconsistencies, we would, certainly, be inclined to consider this a case of enteric fever, complicated with pneumonia, or, possibly, with so-called “typhoid pneumonia.”

Are we to assume that Widal and diazo tests proved negative, or were such tests not made? How long did the girl live after pneumonia symptoms were recognized, that is, after the nineteenth day? You merely state that at that time pneumonia set in, and during the last ten hours of her life the respiratory rate was seventy per minute, and the temperature 107 degrees. Such a temperature, though, is not exceptionally rare, while a respiratory rate of 70 has been observed in pneumonia more or less frequently.

Did the girl complain of headache at the first attack? Any other cases of typhoid fever in the vicinity or evidence of her exposure to infection? Had there been any eruption at any time? What was the character of the stools? What was the shape of the ulcers? Were they superficial? What was the tentative diagnosis prior to the appearance of terminal pneumonia? If you will favor us with fuller clinical data, we shall be in a better position to discuss the case with intelligence.

